

R152. Commerce, Consumer Protection.**R152-11. Utah Consumer Sales Practices Act.****R152-11-1. Purposes, Rules of Construction.**

A. These substantive rules are adopted by the Director of the Division of Consumer Protection pursuant to Section 8 of Chapter 188 of the Laws of Utah, 1973 (Utah Consumer Sales Practices Act, Utah Code Annotated Section 13-11-1 et seq., as amended). Without limiting the scope of any section of the Utah Consumer Sales Practices Act or any other rule, these rules are intended to promote their purposes and policies. The purpose and policies of these rules are to:

(1) define with reasonable specificity acts and practices which violate Section 4 of the Utah Consumer Sales Practices Act.

(2) protect consumers from suppliers who engage in referral sellings, commit deceptive acts or practices, or commit unconscionable acts or practices.

(3) encourage the development of fair consumer sales practices.

(4) supplement and compliment any other rules promulgated by the State of Utah or any agency or subdivision thereof or any other governmental entity.

B. Definitions.

(1) "Advertisement" means any written, visual, or oral communication made to a consumer by means of newspaper, magazine, circular, billboard, direct mailing, sign, radio, television or otherwise, which identifies or represents the terms of any item of goods, service, franchise, distributorship or intangible which may be transferred in a consumer transaction.

(2) "Consumer Commodity" means any subject of a consumer transaction.

(3) "Express Authorization" means the agreement of the consumer expressed in a form that is evidenced by a written agreement signed by the consumer or by any electronically transferred authorization from the consumer that is stored, recorded, or retained by the supplier, such as a facsimile transmission, e-mail, telephonic, or other electronic means.

(4) "Fixture" or "Fixtures" means goods or products that are not readily removable from a permanent structure or land itself such as shingling, siding and or windows or other like improvements and which, when they thus become so related to particular real estate that an interest in them arises under real estate law.

(5) "Goods" mean all things which are movable at time of identification to the contract for sale other than the money in which the price is to be paid and things in action.

(6) "Service" means performance of labor or any act for the benefit of another.

(7) "Offer" means any attempt to effect, an offer to enter into a consumer transaction.

(8) "Product" means any goods, services, consumer commodity, or other property, both tangible and intangible (except securities and insurance) which is the subject or object of a consumer transaction.

(9) All other terms used in these regulations shall carry the same meaning and definition as in the Utah Consumer Sales Practices Act unless otherwise specified, consistent with that Act.

R152-11-2. Exclusions and Limitations in Advertisement.

A. It is a deceptive act or practice for a supplier in connection with a consumer transaction, in the sale or offering for sale of a consumer commodity to make any offer in written or printed advertising or promotional literature without stating clearly and conspicuously in close proximity to the words stating the offer of any material exclusions, reservations, limitations, modifications, or conditions. The following are examples of the types of material exclusions, reservations, limitations, modifications, or conditions of offers which must be

clearly stated:

(1) An advertisement for any consumer commodity not disclosing the amount of any additional charge for any of the features displayed or listed in the advertisement would be deceptive.

(2) An advertisement for an article of clothing must state that there is an additional charge for sizes above or below a certain size if such is the case.

(3) An advertisement which offers floor covering with an additional charge for room sizes above or below a certain size must disclose the nature and amount of additional charge.

(4) An advertisement for a consumer commodity sold from more than one outlet under the direct control of the supplier causing the advertisement to be made must state:

(a) Which outlets within the area served by the publication in which the advertisement appears either have or do not have certain features mentioned in the advertisement;

(b) Which outlets within the area served by the publication in which the advertisement appears charge rates higher than the rate mentioned in advertisement. For example:

TABLE

"Rug Shampooer - \$15.00 a day at
West 3rd Street South Office -
all other locations are more."

(c) An advertisement for a consumer commodity sold from outlets not under the direct control of the supplier causing the advertisement to be made does not violate Section 2a(4)(a) or 2a(4)(b) of this rule if it states that the consumer commodity is available only at participating independent dealers.

(5) An advertisement for any consumer commodity requiring installation must reflect the exact price of the commodity and if the price includes installation or if installation is additional.

(6) If the advertised price is available only during certain hours of the day or certain days of the week that fact must be stated along with the hours and days the price is available.

(7) If the advertisement involves or pictures more than one consumer commodity (for example: a sofa, cocktail table and two commodes) and the advertised price applies only if the complete set is purchased, that fact must be stated.

(8) If there is a minimum amount (or maximum amount) that must be purchased for the advertised price to apply, that fact must be stated.

(9) If an advertisement specifies a price for a consumer commodity which includes a trade-in, that fact must be stated. For example: a 6 volt battery for \$50.00 plus your old battery.

(10) If there are "additional" items that must be purchased for the advertised price to apply that fact must be so stated.

(11) These examples are intended to be illustrative only and do not limit the scope of any section of the Utah Consumer Sales Practices Act or of this or any other rule or regulation.

B. Offers made orally, such as through radio or television advertising, must include a conspicuously clear and oral statement of any material exclusions, reservations, modifications, or conditions.

C. If an error is made in advertising, either by pricing, wording, picture, or description, it shall be the responsibility of the supplier to retract or correct the error. A retraction is necessary when it cannot be shown that the error was due to the fault of the advertising medium. If it can be documented that the responsibility rests with the advertising medium, a retraction by the supplier is not necessary but the supplier may post a correction in close proximity to the merchandise which was advertised incorrectly.

R152-11-3. Bait Advertising/Unavailability of Goods.

A. Definitions: For the purposes of this rule, the following

definitions shall apply:

(1) "Raincheck" means a written document evidencing a consumer's entitlement to purchase advertised items at an advertised price within the time limits set forth in paragraph d. of this rule.

(2) "Salesperson" means the supplier or his agent or employee who interacts personally or directly with a consumer in negotiating or effecting a consumer transaction.

B. It shall be a deceptive act or practice in connection with a consumer transaction for a supplier to offer to sell consumer commodities when the offer is not a bona fide effort to sell the advertised consumer commodities. An offer is not bona fide if:

(1) A supplier uses a statement or illustration in any advertisement which would create in the mind of a reasonable consumer a false impression of the grade, quality, quantity, make, value, model, year, size, color, usability, or origin of the consumer commodities offered or which otherwise misrepresents the consumer commodities in such a manner that, on subsequent disclosure or discovery of the true facts, the consumer is diverted from the advertised consumer commodities to other consumer commodities. An offer is not bona fide, even though the true facts are made known to the consumer before he views the advertised consumer commodities, if the first contact or interview is secured by deception.

(2) A supplier discourages the purchase of the advertised consumer commodities in order to sell other consumer commodities. This does not however, prohibit the good faith recommendation concerning a different consumer commodity as it relates to a consumer's particular or unique needs or problems concerning the consumer commodity. The following are examples of acts or practices which raise a presumption that an offer to sell consumer commodities is not bona fide:

(a) Refusal to show, demonstrate, or sell the consumer commodities advertised in accordance with the terms of the advertisement;

(b) Disparagement by the supplier either by acts or words of the advertised consumer commodities or of the guarantee, credit terms, availability of service, repairs, or parts, or any other respects of the consumer commodities;

(c) The failure of a supplier to have available at all outlets under its direct control, or listed in the advertisement, a sufficient quantity of the advertised consumer commodities at the advertised price to meet reasonably anticipated demands, unless the advertisement clearly and adequately disclosed that there is a limited quantity of advertised consumer commodities available and/or that the consumer commodities are available only at the designated outlets;

(d) The failure to give rainchecks to consumers where the advertisement does not disclose that there is a limited quantity or availability of consumer commodities. Suppliers who clearly and consistently post a raincheck policy for public review shall be exempt from this section;

(e) The showing or demonstrating of defective, unusable, or impractical consumer commodities when such defective, unusable, or impractical nature is not fairly and adequately disclosed in the advertisement;

(f) The use of a sales plan or method of compensation for salesperson designed to prevent or discourage them from selling the advertised consumer commodity. This does not, however, prohibit the usual and reasonable use of commissions as a means of compensation;

(g) The demonstration of an advertised consumer commodity in such a manner that makes the commodity appear inferior.

(3) A supplier, in the event of a sale to the consumer of the offered consumer commodities, attempts to persuade a consumer to repudiate the purchase of the offered commodities and purchase other consumer commodities in their stead, by any means, including but not limited to the following:

(a) Accepting a consideration for the offered consumer commodities and then switching the consumer to other commodities;

(b) Delivering offered consumer commodities which are unusable or impractical for the purposes represented or materially different from the offered consumer commodities. The purchase on the part of some consumers of the offered consumer commodities is not in itself prima facie evidence that the offer is bona fide.

(4) A supplier represents in any advertisement, which would create in the mind of the consumer, a false impression that the offer of goods has been occasioned by a financial or natural catastrophe when such is not true.

(5) A supplier misrepresents the former price, savings, quality or ownership of any goods sold.

R152-11-4. Use of the Word "Free" etc.

A. It shall be a deceptive act or practice in connection with a consumer transaction for a supplier to use the word "free" or other words of similar import or meaning, except when such representation is, in fact, the case and the cost of the "free" consumer commodity is not passed on to the consumer by raising the regular price of the consumer commodity that must be purchased in connection with the "free" offer.

(1) The meaning of "free".

(a) An offer of "free" consumer commodities is based upon a regular price for the merchandise or services which must be purchased by consumers in order to avail themselves of that which is represented to be "free." Such consumer commodities are not free if the supplier will directly and immediately recover, in whole or in part, the costs of the free consumer commodities by marking up the price of the other consumer commodities which must be purchased, by the substitution of inferior consumer commodities, or otherwise.

(b) For the purpose of this rule, all references to the word "free" shall include within the term all other words of similar import and meaning. Representative of the word or words to which this rule is applicable would be the following: "free"; "buy one, get one free"; "two for one sale"; "50% off the purchase of two"; "gift"; "given without charge"; "bonus" or other words and terms which tend to convey to the consuming public the impression that an item of a consumer commodity is "free".

(2) The meaning of "regular price".

(a) The term "regular price" means the price in the same quantity, quality, and with the same service, at which the seller or advertiser of the consumer commodity has openly and actively sold the consumer commodity in the geographic market or trade area in which he is making a "free" or similar offer in the most recent and regular course of business for a reasonably substantial period of time. For consumer products or services which fluctuate in price, the "regular price" shall be the lowest price at which any substantial sales were made during the aforementioned period of time.

(b) Negotiated sales. If a consumer commodity usually is sold at a price arrived at through bargaining, rather than at a regular price, it is improper to represent that another consumer commodity is being offered "free" with the sale, unless the supplier is able to establish a mean, average price immediately prior to the free offer. The same representation is also improper where there may be a regular price, but where other material factors such as quantity, quality, or size are arrived at through bargaining.

(3) Frequency of offers.

(a) In order to establish a regular price over a reasonably substantial period of time, a single kind of consumer commodity should not be advertised with a "free" offer in a trade area for more than six months in any twelve-month period. At least 30 days should elapse before another such offer is promoted in the

same trade area. No more than three such offers should be made in the same area in any twelve-month period.

B. Disclosure of Conditions. A "free" or similar offer is deceptive unless all the terms, conditions, and obligations upon which receipt and retention of the "free" item are contingent are set forth clearly and conspicuously at the outset of the offer so as to leave no reasonable probability that the terms of the offer might be misunderstood.

C. Combination Offer. This rule does not preclude the use of nondeceptive, "combination" offers in which two or more items of consumer commodities such as, but not limited to, toothpaste and a toothbrush, or soap and deodorant, or clothing and alterations are offered for sale as a single unit at a single state price, and, in which no representation is made that the price is being paid for one item and the other is "free." Similarly, suppliers are not precluded from settling a price for an item of consumer commodities which also includes furnishing the consumer with a second, distinct item of consumer commodities at one inclusive price if no presentation is made that the latter is free.

D. Introductory Offers. No "free" offers should be made in connection with the introduction of a new consumer commodity offered for sale at a specified price unless the offerer expects in good faith to discontinue the offer after a limited time and to commence selling the consumer commodity promoted separately, at the same price at which it was promoted with a "free" offer.

R152-11-5. Repairs and Services.

A. It shall be a deceptive act or practice in connection with a consumer transaction involving repairs, inspections, or other similar services for a supplier to:

(1) Fail to obtain the consumer's express authorization for repairs, inspections, or other services. The authorization shall be obtained only after the supplier has clearly explained to the consumer the anticipated repairs, inspection or other services to be performed, the estimated charges for those repairs, inspections or other services, and the reasonably expected completion date of such repairs, inspection or other services to be performed, including any charge for re-assembly of any parts disassembled in regards to the providing of such estimate. For repairs, inspections or other services that exceed a value of \$50, a transcript or copy of the consumer's express authorization shall be provided to the consumer on or before the time that the consumer receives the initial billing or invoice for supplier's performance. This rule is in addition to the requirements of any other statute or rule;

(2) Fail to obtain the consumer's express authorization for additional, unforeseen, but necessary, repairs, inspections, or other services when those repairs, inspections, or other services amount to ten percent (10%) or more (excluding tax) of the original estimate. A transcript or copy of the consumer's express authorization shall be provided to the consumer on or before the time that the consumer receives the initial billing or invoice for supplier's performance. This rule is in addition to the requirements of any other statute or rule;

(3) Fail to re-assemble any parts disassembled for inspection unless the consumer is so advised, prior to acceptance for inspection by supplier that there will be a charge for re-assembly of the parts or that it is not possible to re-assemble such parts;

(4) Charge for repairs, inspections, or other services which have not been authorized by the consumer;

(5) In the case of an in-home service call where the consumer had initially contacted the supplier, to fail to disclose before the supplier's repairman goes to the consumer's residence that a service or diagnostic charge will be imposed, even though no repairs may be effected;

(6) Represent that repairs, inspections, or other services

are necessary when such is not the fact;

(7) Represent that repairs, inspections, or other services must be performed away from the consumer's residence when such is not the fact;

(8) Represent that repairs, inspections or other services have been made when such is not the fact;

(9) Represent that the goods being inspected or diagnosed are in a dangerous condition or that the consumer's continued use of them may be harmful to him when such is not the fact;

(10) Intentionally understate or misstate materially the estimated cost of repairs, inspections, or other services;

(11) Fail to provide the consumer with an itemized list of repairs, inspections, or other services performed and the reason for such repairs, inspections, or other services, including:

(a) A list of parts and a statement of whether they are new, used, rebuilt, or after market, and the cost thereof to the consumer; and

(b) The number of hours of labor charged, apportioned for each part, service or repair, and the name or other reasonable means of identification of the mechanic or repairman performing the service, provided, however, that the requirements of (b) shall be satisfied by the statement of a flat rate price if such repairs are customarily done and billed on a flat rate price basis and such has been previously disclosed to the consumer in writing.

(12) Fail to give reasonable written notice before repairs, inspections, or other services are provided, that replaced or repaired parts may be inspected or fail to allow the consumer to inspect replaced or repaired parts on request, unless:

(a) the parts are to be rebuilt or sold by the supplier and such intended reuse is made known to the consumer by written notice on the original estimate; or

(b) the parts are to be returned to the manufacturer or distributor under a written warranty agreement; or

(c) the parts are impractical to return to the consumer because of size, weight, or other similar factors; or

(d) the consumer waives the return of such parts in writing after repairs are completed and a total cost is presented.

(13) Fail to provide to the consumer a written, itemized receipt for any consumer commodities that are left with, or turned over to, the supplier for repairs, inspections, or other services. Such receipt shall include:

(a) The exact name and business address of the business entity (or person, if the entity is not a corporation or partnership) which will repair or service the consumer commodities.

(b) The name and signature of the person who actually takes the consumer commodities into custody.

(c) The name of any entity to whom such repairs, inspections, or other services are sublet including the address, phone number and a contact person at such entity.

(d) A description including make and model number or such other features as will reasonably identify the consumer commodities to be repaired or serviced.

B. It shall be a deceptive act or practice in connection with a consumer transaction involving all other services not covered under Section A for a supplier to:

(1) Intentionally understate or misstate the estimated cost of the services to be provided;

(2) Fail to obtain the consumer's express authorization prior to performing services that exceed a value of \$50;

(3) Fail to obtain the consumer's express authorization for any change orders, cost increases, or other amendments to the parties' contract;

(4) Fail to give the consumer written documentation containing the terms of any warranty made with respect to labor, services, products, or materials furnished;

(5) Misrepresent that the supplier has the particular license, bond, insurance, qualifications, or expertise that is

related to the work to be performed;

(6) Misrepresent that the consumer's present equipment, material, product, home or a part thereof is dangerous or defective, or in need of repair or replacement;

(7) Fail to timely complete performance under the contract as represented unless the cause for the delay is beyond the supplier's control or the supplier obtains the consumer's express authorization to the supplier's delay;

(8) Wrongfully refuse to perform any obligation under a contract with the intent to induce the consumer to agree to pay a higher price than originally agreed to in the contract; or

(9) Misrepresent or mislead the consumer into believing that no obligation will be incurred because of the signing of any document, or that the consumer will be relieved of some or all obligations under a contract by the signing of any document.

R152-11-6. Prizes.

A. It shall be a deceptive act or practice in connection with a consumer transaction for a supplier to notify in any way a consumer or prospective consumer that he has (1) won a prize or will receive anything of value, or (2) been selected, or is eligible, to win a prize or receive anything of value, if the receipt of the prize or thing of value is conditioned upon the consumer's listening to or observing a sales promotional effort or entering into a consumer transaction, unless the supplier clearly and explicitly discloses, at the time of notification of the prize, that an attempt will be made to induce the consumer or prospective consumer to undertake a monetary obligation irrespective of whether that obligation constitutes a consumer transaction. If a supplier states or implies a value to the prize or thing of value the true market value of such prize must be accurately stated. A supplier must further state that the prize or thing of value could not benefit the consumer or prospective consumer without the expenditure of the consumer's or prospective consumer's time or transportation expense, or that a salesman will be visiting the consumer's or prospective consumer's residence; if such is the case.

B. A statement to the effect that the consumer or prospective consumer must observe or listen to a "demonstration" or promotional effort in connection with a consumer transaction does not satisfy the requirements of this rule, unless it is reasonably clear from the information supplied to the consumer that the supplier is in the business of making consumer sales or that the intent is to encourage or induce the consumer to undertake a monetary obligation irrespective of whether that obligation constitutes a consumer transaction.

R152-11-7. New for Used.

A. Except as provided in Section 7c and d of this rule, it shall be a deceptive act or practice in connection with a consumer transaction for a supplier to represent, directly or indirectly, that an item of consumer commodity, or that any part of an item of consumer commodity, is new or unused when such is not the fact, or to misrepresent the extent of previous use thereof, or to fail to make clear and conspicuous disclosures, prior to time of offer, to the consumer or prospective consumer that an item of consumer commodity has been used.

B. For the purpose of this rule, "used" shall include rebuilt, re-manufactured, reconditioned consumer commodity or parts, thereof, or used either as a demonstrator or as a consumer commodity by a previous consumer.

C. For the purpose of this rule, a returned consumer commodity which has not been used by a previous purchaser, shall be considered new or unused.

D. The disclosure that an item of consumer commodity has been used or contains used parts as required by Section 7a may be made by use of words such as, but not limited to, "used"; "second hand"; "repaired"; "re-manufactured"; "reconditioned"; "rebuilt"; or "reline"; whichever is applicable to the item of

consumer commodity involved.

R152-11-8. Substitution of Consumer Commodities.

A. It shall be a deceptive act or practice in connection with a consumer transaction for a supplier to furnish similar consumer commodities of equal or greater value when there was no intention to ship, deliver or install the original consumer commodities ordered. The act of a supplier in furnishing similar merchandise of equal or greater value as a good faith substitute does not violate this rule if such substitution is first approved by the consumer.

B. For the purpose of this rule, consumer commodities may not be considered of "equal or greater value" if they are not substantially similar to the consumer commodity ordered, or are not fit for the purposes intended, or if the supplier normally offers the substituted consumer commodities at a lower price than the "regular price".

C. It will be assumed that a supplier had no intention to deliver, ship, or install the original ordered or substitute goods if the supplier fails to ship, deliver or install the goods within 30 days of the date of the order, purchase or of the notice of delay and fails to notify the purchaser of any delay or further delay; unless the supplier can show that it has made a good faith effort to ship, deliver or install the goods or to notify the purchaser of any delay or further delay within the prescribed period.

R152-11-9. Direct Solicitations.

A. It shall be a deceptive act or practice in connection with a consumer transaction involving any direct solicitation sale for a supplier to do any of the following:

(1) Solicit a sale without clearly, affirmatively, and expressly revealing at the time the seller initially contacts the consumer or prospective consumer, and before making any other statements or asking any questions, except for a greeting: the name of the seller, the name or trade name of the company, corporation or partnership the seller represents, and stating in general terms the nature of the consumer commodities the seller wishes to show or demonstrate.

(2) Represent that the consumer or prospective consumer will receive a discount, rebate, or other benefit for permitting his home or other property, real or personal, to be used as a so-called "model home" or "model property" for demonstration or advertising purposes when such, in fact, is not true;

(3) Represent that the consumer or prospective consumer has been specially selected to receive a bargain, discount, or other advantage when such, in fact, is not true;

(4) Represent that the consumer or prospective consumer is a winner of a contest when such, in fact, is not true;

(5) Represent that the consumer commodities that are being offered for sale cannot be purchased in any place of business, but only through direct solicitation, when such, in fact, is not true;

(6) Represent that the salesman representative, or agent has authority to negotiate the final terms of a consumer transaction when such, in fact, is not true;

(7) Sell, lease, or rent consumer goods or services with a purchase price of \$25 or more and fail to furnish the buyer with a fully completed receipt or copy of any contract pertaining to such sale at the time of its execution which is in the same language (e.g. Spanish) as that principally used in the oral sales presentation and which shows the date of the transaction and the name and address of the seller.

(8) Except as otherwise provided in the "Home Solicitations Sales Act", Section 70C-5-102(5) and or the "Telephone Fraud Prevention Act", Section 13-26-5, to fail to provide a notice of the buyer's right to cancel within three (3) business days at the time of purchase if the total of the sale exceeds \$25, unless the supplier's cancellation policy is communicated to the buyer and the policy offers greater rights

to the buyer than three days, which notice shall be in conspicuous statement written in dark bold at least 12 point type on the front page of the purchase documentation, and shall read as follows: "You, the Buyer, May Cancel This Transaction At Any Time Prior to Midnight of the Third Business Day (or Time Period Reflecting the Supplier's Cancellation Policy But Not Less Than Three Business Days) After the Date of This Transaction or Receipt of The Product, Whichever is Later."

(a) Paragraph (8) shall not apply to "fixture" solicitation sales where the supplier:

(i) automatically provides the buyer a right to cancel within three (3) or more business days from the time of purchase; or

(ii) automatically provides a refund for return of goods within three (3) or more business days from the time of purchase, but prior to installation as a fixture; or

(iii) supplies merchandise to a buyer without prior full payment and allows the buyer three (3) or more business days from the time of receipt of the merchandise, but prior to installation as a fixture to cancel the order and return the merchandise; or

(iv) discloses its refund/return policy in its advertising, catalog and contract, and that policy provides for a return of merchandise within a period of three (3) or more business days from the time of purchase, but prior to installation as a fixture or that policy indicates no return or refund will be offered or made on special merchandise (such as uniquely sized items, custom made or special ordered items); or

(9) Fail or refuse to honor any valid notice of cancellation by a consumer and within 30 calendar days after the receipt of such notice, to: (i) refund all payments made under the contract or sale; (ii) return any goods or property traded in, in substantially as good condition as when received by the supplier; (iii) cancel and return any negotiable instrument executed by the buyer in connection with the contract or sale and take any action necessary or appropriate to terminate promptly any security interest created in the transaction.

B. "Direct Solicitation" means solicitation of a consumer transaction initiated by a supplier, at the residence or place of employment of any consumer, and includes a sale or solicitation of sale made by the supplier by direct mail or telephone or personal contact at the residence or place of employment of any consumer. In the case of a subscription or club membership (e.g., tape, book, or record club) solicitation, "direct solicitation" means solicitation of the initial consumer transaction pursuant to a subscription or club membership agreement, made by the supplier at the residence or place of employment of any consumer, and includes a solicitation of an initial sale made by the supplier by direct mail or telephone or personal contact at the residence or place of employment of any consumer, but excludes all subsequent consumer transactions which are provided for in the subscription or club membership agreement.

C. "Time of Purchase" is defined as the day on which the buyer signs an agreement or accepts an offer to purchase consumer goods or services where the total of the sale is \$25 or more.

D. Except for direct solicitations subject to Section 13-26-5, for the purposes of this rule "business day" does not include Saturday, Sunday, or a federal or state holiday.

R152-11-10. Deposits and Refunds.

A. It shall be a deceptive act or practice in connection with a consumer transaction for a supplier to accept a deposit unless the following conditions are met:

(1) The deposit obligates the supplier to refrain for a specified period of time from offering for sale to any other person the consumer commodities in relation to which the deposit has been made by the consumer if such consumer commodities are unique; provided that a supplier may continue

to sell or offer to sell consumer commodities on which a deposit has been made if he has available sufficient consumer commodities to satisfy all consumers who have made deposits;

(2) All deposits accepted by a supplier must be evidenced by dated receipts, provided to the consumer at the time of the transaction, stating the following information:

(a) Description of the consumer commodity, (including model, model year, when appropriate, make, and color);

(b) The cash selling price;

(c) Allowance on the consumer commodity to be traded in, if any;

(d) Time during which the option is binding;

(e) Whether the deposit is refundable and under what conditions; and

(f) Any additional cost such as delivery charge.

(3) For the purpose of this rule "deposit" means any payment in cash, or of anything of value or an obligation to pay including, but not limited to, a credit device transaction incurred by a consumer as a deposit, refundable or non-refundable option, or as partial payment for consumer commodities.

B. It shall be a deceptive act or practice in connection with a consumer transaction when the consumer can provide reasonable proof of purchase from a supplier for the supplier to refuse to give refunds for:

(1) Used, damaged or defective products, unless they are clearly marked "as is" or with some other conspicuous disclaimer of any implied or express warranty, and also clearly marked that no refund will be given; or

(2) Non-used, non-damaged or non-defective products unless:

(a) Such non-refund, exchange or credit policy, including any applicable restocking fee, is clearly indicated by:

(i) a sign posted at the point of display, the point of sale, the store entrance;

(ii) adequate verbal or written disclosure if the transaction occurs through the mail, over the telephone, via facsimile machine, via e-mail, or over the Internet; or

(iii) a clear and conspicuous statement on the first or front page of any sales document or contract at the time of the sale.

(b) The consumer commodities are food, perishable items, merchandise which is substantially custom made or custom finished.

(3) For the purpose of this rule "refund" means cash if payment were made in cash provided that if payment were made by check the refund may be delayed until the check has cleared; and further provided that if payment were made by debit to a credit card or other account, then refund may be made by an appropriate credit or refund pursuant to the applicable law.

C. It shall be a deceptive act or practice in connection with a consumer transaction for a supplier who has accepted a deposit and has received from the consumer within a reasonable time a valid request for refund of the deposit to fail to make the refund within 30 calendar days after receipt of such request.

(1) In determining the amount required to be refunded under this rule, the supplier may take into consideration the nature of the commodity returned, the condition of the commodity returned, shipping charges if agreed to and any lawful restocking fee.

(2) For purposes of this rule, "reasonable time" means within 30 days of the date of the deposit unless a longer period is justified due to the nature of the commodity returned or any agreement between the parties.

D. No deposit accepted by a supplier to secure the value of equipment or materials provided to a consumer for the consumer's use in any business opportunity where it is anticipated by either the consumer or the supplier that some remuneration will be paid to the consumer for services or goods supplied to the supplier or to some third party in the behalf of the supplier shall exceed the actual cost of the supplies or

equipment paid by the supplier or any person acting on behalf of the supplier.

R152-11-11. Franchises, Distributorships, Referral Sales.

A. Definitions. As used in this chapter, the following words and terms shall have the following meanings, unless some other meaning is plainly indicated:

(1) "Referral Selling" means any consumer transaction where the seller gives or offers a rebate or discount to the buyer as an inducement for a sale in consideration of the buyer's providing the seller with the names of prospective purchasers.

(2) The term "franchise or distributorship" means a contract or agreement requiring substantial capital investment, either expressed or implied, whether oral or written, between two or more persons:

(a) Wherein a commercial relationship of definite duration or continuing indefinite duration is involved;

(b) Wherein the purchaser, is granted the right to offer, sell and distribute consumer commodities manufactured, processed, distributed or, in the case of services, organized and directed by the seller; and the purchaser has not been previously engaged in such business opportunity;

(c) Wherein the franchise or distributorship as an independent business constitutes a component of seller's distribution system; or

(d) Wherein the operation of the purchaser's business is substantially reliant on sellers for the basic supply of consumer commodities.

B. Franchises and Distributorships. It shall be an unfair or deceptive act or practice for any person in the trade or commerce of establishing a franchise, distributorship to:

(1) Misrepresent the prospects or chances for success of a proposed or existing franchise or distributorship;

(2) Misrepresent by failure to disclose or otherwise, the known required total investment for such franchise or distributorship;

(3) Misrepresent or fail to disclose efforts to sell or establish more franchises or distributorships than is reasonable to expect the market or market area for the particular franchise or distributorship to sustain;

(4) Misrepresent the quantity or quality of the products to be sold or distributed through the franchise or distributorship;

(5) Misrepresent the training and management assistance available to the franchise or distributorship;

(6) Misrepresent the amount of profits, net or gross, the franchisee can expect from the operation of the franchise or distributorship;

(7) Misrepresent the size, choice, potential or demographic feature of a franchise territory or misrepresent the number of present or future franchises or distributorships within the franchise territory;

(8) Misrepresent by failure to disclose or otherwise, the termination, transfer or renewal provision of a franchise or distributorship agreement;

(9) Falsely claim or infer that a primary marketer of trademark products or services sponsors or participates directly or indirectly in the franchise or distributorship operation;

(10) Assign a so-called exclusive territory encompassing the same area to more than one franchise;

(11) Provide vending locations for which written authorizations have not been granted by the property owners or lessees of the premises;

(12) Provide vending machines or displays of a brand or kind different from or inferior to those promised by the seller;

(13) Fail to provide to the purchaser a written contract which includes the following provisions:

(a) The total financial obligation of the purchaser to the seller;

(b) The date of delivery of the purchaser consumer

commodity to the purchaser if the seller is responsible for delivery of such consumer commodity;

(c) The description and quantity of consumer commodities to be delivered to the purchaser if the seller is responsible for delivery of such consumer commodities; and

(d) All other disclosures and provisions required in the preceding subsections;

(14) Fail to honor his contract as required in this section with the purchaser.

R152-11-12. Negative Options.

A. A negative option, as defined in 16 C.F.R. 425.1, is a deceptive act or practice only if the negative option violates 16 C.F.R. 425.1.

R152-11-13. Travel Packages.

(1) This rule is authorized by Subsection 13-11-8(2). The purpose of this rule is to define one type of conduct that violates Subsection 13-11-4(1).

(2) It shall be a deceptive act or practice for a supplier to offer, knowingly or intentionally, a reduced rate travel package which:

(a) is tendered to a consumer as an incentive for the performance of some act the consumer has no legal obligation to perform;

(b) is subject to redemption rules the violation of which will result in a default which discharges the supplier's obligation to perform under such rules; and

(c) is structured so that the supplier will only realize a profit if a majority of the consumers who receive reduced rate travel package default.

(3)(a) For a supplier to be held liable under this rule, it is not necessary that he contract directly with a consumer for a reduced rate travel package. It is a sufficient basis for liability for the supplier to offer such a package to any person knowing that a consumer eventually will look to him for performance.

(b) A supplier acts deceptively required by Subsection 13-11-4(2) when he consciously engages in conduct which constitutes a deceptive act or practice, even if he is unaware that such conduct is unlawful.

(4) The definitions appearing in Section 13-11-3 shall apply to this rule, with the following additional definitions:

(a) "reduced rate" means the payment of funds, whether styled as fees, taxes, a discounted payment, or otherwise, which is less than the fair market value of the travel package offered by a supplier; and

(b) "travel package" means air, land, or sea transportation, with or without lodging, for pleasure or business purpose within the scope of the term "consumer transaction".

KEY: advertising, bait and switch, consumer protection, negative options

February 7, 2011

Notice of Continuation April 19, 2016

63G-3-201

13-2-5

13-11

R152. Commerce, Consumer Protection.**R152-26. Telephone Fraud Prevention Act.****R152-26-1. Authority.**

These rules are promulgated pursuant to Section 13-2-5 to administer the Utah Telephone Fraud Prevention Act.

R152-26-2. Scope and Applicability.

These rules shall have the same scope and applicability as Title 13, Chapter 26.

R152-26-3. Definitions.

The following terms, in addition to the definitions appearing in Section 13-26-2, shall be used in construing this rule.

(1) "Director" means the director of the Utah Department of Commerce, Division of Consumer Protection.

(2) "Division" means the Utah Department of Commerce, Division of Consumer Protection.

(3) "Registrant" means any person who has submitted an application for registration to the division pursuant to Section 13-26-3.

(4) "Durable goods" means goods likely to be used for three years or more.

R152-26-4. Denial, Revocation, or Suspension of Registration.

(1) The director may deny an application for registration for the following reasons:

(a) the registrant has committed any of the violations of law set forth in Section 13-26-11; or

(b) the registrant has failed to comply with all of the requirements of Section 13-26-3 and these rules;

(2) The director may suspend or revoke a registration for any violation of Title 13, Chapter 26 by the registrant.

R152-26-5. Registration.

(1) A registrant shall submit an application for registration only on the form authorized by the division. An application may be summarily denied if:

(a) it is submitted on a form not authorized by the division;

(b) it is submitted on the authorized form but it is not legible; or

(c) it is submitted on the authorized form but it is incomplete in some material respect.

(2) The application shall include the following:

(a) the registrant's name, address, telephone number and facsimile number, if any;

(b) the names, addresses, birth dates and places, and social security numbers of all registrant's officers, directors, members, principals and/or key employees;

(c) the registrant's previous business addresses during the previous ten years;

(d) other names, if any, that the registrant does business under;

(e) identification of all licenses or permits currently held by the registrant and any that have been revoked or suspended;

(f) disclosure of any judgment, injunctive order or conviction of any of registrant's officers, directors, members, principals, or key-employees of racketeering or any offense involving fraud, theft, embezzlement, fraudulent conversion of property, misappropriation of property or other similar crimes;

(g) the name and address of the registrant's registered agent;

(h) the location where telephone numbers are to be dialed; and

(i) a description of the goods or services that are to be the subject of the telephone solicitation.

(3) Each registrant shall submit copies of the following documents with their application:

(a) All scripts to be used in the telephone solicitation;

(b) Articles of incorporation or other organizational documentation showing registrant's current legal status.

(4) At the option of the director, the processing of an application by the division's staff may be delayed to give the registrant an opportunity to cure technical defects in his application.

(5) If information in an application for registration or for renewal of registration as a telephone soliciting business materially changes or becomes incorrect or incomplete, the applicant shall, within 30 days after the information changes or becomes incorrect or incomplete, submit the correct information on the corresponding page of the registration application with a cover page or letter clarifying that the submission is correcting information to an existing registration.

(a) Material changes to the legal status of the registrant's organization or ownership of the telephone soliciting business may not be submitted as an amendment to an existing registration. An initial application for registration must be completed and submitted for approval by the Division.

(b) The director may suspend or revoke a registration if material changes or corrections to the registration are not submitted as required by this rule.

R152-26-7. Bonds, Irrevocable Letters of Credit and Certificates of Deposit.

(1) At the option of the registrant, a bond, irrevocable letter of credit or certificate of deposit may be tendered to the division to fulfill the requirements of Section 13-26-3(3)(a).

(2) Whichever type of instrument is tendered by a registrant, payment is immediately due and owing to the division when:

(a) the director delivers a signed writing to the registrant's surety or issuing financial institution demanding payment of a specified sum of money; and

(b) the registrant's liability in the amount specified is demonstrated by a certified copy of the division's final order or the civil judgment of any Utah or federal court, which copy shall be attached to the director's demand for payment.

(3) The division may make a demand on a bond, irrevocable letter of credit or certificate of deposit either in its own right or as the representative of consumers who have been injured by the registrant's violation of Title 13, Chapter 26.

(4) Instruments tendered to the division under Section 13-26-3(3)(a) may be executed in any form that the director deems commercially and legally reasonable and consistent with this rule. The division's acceptance of a non-conforming instrument does not result in a waiver of the requirements of this rule.

R152-26-8. Isolated Transaction Exemption.

For purposes of Section 13-26-4(2)(i), an "isolated transaction" means no more than two occurrences in any twelve month period.

R152-26-9. Right of Rescission.

(1) For purposes of Section 13-26-5(2), a written notification of cancellation is effective the earlier of:

(a) when the notice is actually received by the seller; or

(b) when the notice is placed in the custody of the U.S. Postal Service, provided the postage is prepaid and the letter is properly addressed to the seller.

(2) A rescission letter is in the custody of the U.S. Postal Service when the letter is actually placed in the possession of a U.S. Postal Service employee or in a receptacle for letters authorized by the U.S. Postal Service.

KEY: telephones, fraud, consumers

January 7, 2014

Notice of Continuation April 19, 2016

13-2-5

**R156. Commerce, Occupational and Professional Licensing.
R156-9. Funeral Service Licensing Act Rule.**

R156-9-101. Short title.

This rule shall be known as the "Funeral Service Licensing Act Rule".

R156-9-102. Definitions.

In addition to the definitions in Title 58, Chapters 1 and 9, as defined or used in this rule:

(1) "Contract" means a guaranteed preneed funeral arrangement contract.

(2) "Funeral service establishment" is defined in Subsection 58-9-102(18).

(3) "Guaranteed product contract" means a contract wherein goods or services are selected which will be provided at the time of need for the consideration specified in the contract regardless of the market price at the time of need.

(4) "Recipient of goods and services" is synonymous with "beneficiary" as defined in Subsection 58-9-102(2), and is used herein to avoid confusion with various common meanings of the term "beneficiary".

(5) "Unprofessional conduct" as defined in Title 58, Chapters 1 and 9, is further defined in accordance with Subsection 58-1-203(1)(e) in Section R156-9-502.

R156-9-103. Authority - Purpose.

This rule is adopted by the Division under the authority of Subsection 58-1-106(1)(a) to enable the Division to administer Title 58, Chapter 9.

R156-9-104. Organization - Relationship to Rule R156-1.

The organization of this rule and its relationship to Rule R156-1 is as described in Section R156-1-107.

R156-9-302a. Qualifications for Licensure - Examination Requirements.

In accordance with Subsections 58-1-203(1)(d) and 58-1-301(3), the qualifications for licensure in Subsections 58-9-302(1)(g), 58-9-302(2)(e), 58-9-302(4)(e) and 58-9-306(6) and (7) are defined, clarified, or established as follows:

(1) An applicant for licensure as a funeral service director shall pass the National Board Examinations (science and art sections) of the Conference of Funeral Service Examining Boards. The examination may be taken while the individual is enrolled in an approved funeral service school.

(2) An applicant for licensure as a funeral service director, funeral service intern, preneed sales agent or funeral service director by endorsement shall pass the Utah Funeral Service Law and Rule Examination with a score of at least 75%.

(3) An individual who fails the Utah Funeral Service Law and Rule Examination may retake the failed examination:

(a) no more than three times within a six month period; and

(b) no earlier than three months following any failure thereafter.

R156-9-303. Renewal Cycle - Procedures.

(1) In accordance with Subsection 58-1-308(1), the renewal date for the two-year renewal cycle applicable to licenses under Title 58, Chapter 9 is established by rule in Section R156-1-308a.

(2) Renewal procedures shall be in accordance with Section R156-1-308c.

R156-9-304. Continuing Professional Education - Funeral Service Directors.

In accordance with Subsections 58-1-203(1)(g) and 58-1-308(3)(b) and Section 58-9-304, the continuing education requirements for funeral service directors is defined, clarified or

established as follows:

(1) Continuing professional education shall consist of 20 hours of qualified continuing professional education in each preceding two-year period of licensure or expiration of licensure.

(2) If a renewal period is shortened or extended to effect a change of renewal cycle or if an initial license is granted for a period of less than two years, the continuing professional education hours required for that period shall be increased or decreased accordingly as a pro rata amount of the requirements of a two-year period.

(3) The standards for qualified continuing professional education are:

(a) College classes, seminars, or workshops sponsored by professional associations in areas related to funeral service will generally qualify for continuing professional education (CPE) if the education contributes to the professional competence and knowledge of the funeral service director and if the program complies with the standards set forth under Subsection (b).

(b) CPE programs shall meet the following standards:

(i) the course shall be formally organized and be primarily instructional;

(ii) the sponsor shall prepare an outline of the course which shall be retained for a minimum of four years following the presentation;

(iii) the sponsor shall list the hour rating of the course in the course outline. One hour of CPE shall be credited for each 50 minute period of instruction;

(iv) the sponsor shall record and keep an accurate record of course attendance including the date, place, and the name of the licensed funeral service directors attending the course; and

(v) the sponsor shall issue a certificate of completion listing the time, date, place, name of licensee, number of hours of CPE completed and the course title.

(c) Formal correspondence or other individual study programs which require registration shall provide evidence of satisfactory completion including test results and meet all other requirements as specified in this section will qualify.

(d) Each semester hour of college credit shall equal 15 hours of CPE. A quarter hour shall equal ten hours of CPE.

(4) Upon written request from the licensee, the Board may waive the requirement for CPE as provided in Section R156-1-308d.

(5) The licensee is responsible to insure that the program will qualify for CPE. Each licensee shall keep an accurate record of CPE on forms supplied by the Division. The records shall be maintained for a minimum of four years.

(6) The Division in collaboration with the Board shall perform random audits to determine if the licensee is in compliance with the CPE requirements. If audited, or upon request by the Division, the licensee is responsible to submit documentation of compliance with CPE requirements.

R156-9-401. Facility/Staff Requirements.

(1) The funeral service establishment is responsible for the maintenance and safe operation of equipment used in funeral services and to insure that the facility is in compliance with the local or state health, fire and life safety codes. All mortuaries shall be kept and maintained in a clean and sanitary condition and all embalming tables, sinks, receptacles, instruments and other appliances used in embalming and cremation of dead human bodies shall be thoroughly cleansed and disinfected.

(2) The funeral service director is responsible to comply with the standards established by the Occupational Safety and Health Administration for the Federal Government and for the State of Utah.

(3) A funeral establishment or a number of funeral establishments under one management shall contain:

(a) a preparation room equipped with tile, cement, or

composition floor, necessary drainage and ventilation. Every preparation room shall be provided with proper and convenient receptacles for refuse, bandages, cotton and other waste materials and supplies. All refuse, bandages, cotton, and other waste materials shall be destroyed in a sanitary manner, in accordance with health regulations.

(b) necessary instruments, supplies and proper protective clothing for the preparation and embalming of dead human bodies for burial, transportation, or other disposition.

(4) The care and preparation of the body for burial or other disposition of all human dead bodies shall be strictly private. No one shall be allowed in the embalming room while a dead body is being embalmed, except the licensed embalmer, intern, staff, public officials in the discharge of their duties and upon request, members of the immediate family of the deceased.

R156-9-402. Duties and Responsibilities of a Funeral Service Director in Supervision of Funeral Service Interns, Preneed Funeral Arrangement Sales Agents and Unlicensed Staff.

The duties and responsibilities of a supervising funeral service director include:

(1) being professionally responsible for the acts and practices of the supervisee;

(2) being engaged in a relationship with the supervisee in which the supervisor is independent from control by the supervisee and in which the ability of the supervisor to supervise and direct the practice of the supervisee is not compromised;

(3) being available for advice, consultation, and direction consistent with the standards and ethics of the profession and the requirements suggested by the total circumstances including the supervisee's level of training;

(4) monitoring the performance of the supervisee for compliance with laws, standards, and ethics applicable to the funeral service profession, including the Utah Vital Statistics Rules of the Utah Department of Health;

(5) submitting appropriate documentation to the Division with respect to all work completed by the funeral service intern evidencing the performance of the supervisee during the period of supervised training, including the supervisor's evaluation of the supervisee's competence in the practice of the funeral service profession. This report shall be submitted to the Division within 30 days after the supervisor-supervisee relationship is terminated or within 30 days after the supervisee has completed 2000 hours of supervised experience in a period exceeding one year, performed 50 embalmings, and has satisfactorily completed all the duties and functions of an intern throughout the entire internship period;

(6) supervising not more than one funeral service intern at any given time unless approved by the Board and Division;

(7) being physically present and directly supervising, or ensuring that another funeral director directly supervises all duties and functions completed by a funeral service intern throughout the entire internship period;

(8) being responsible for and signing all preneed and at need funeral contracts sold by persons under supervision;

(9) assuring each supervisee is appropriately licensed as a funeral service intern or preneed funeral arrangement sales agent prior to beginning the supervision;

(10) notifying the Division of beginning or ending of association or employment of a preneed sales agent with the funeral service establishment within ten days. Notification shall be made on forms provided by the Division; and

(11) assuring that the supervision requirements are met as required in Section 58-9-307.

R156-9-403. Death Registration - Removal of Body - Transportation and Preservation of Dead Human Bodies.

(1) A funeral service director licensed in another state may enter the state of Utah for the purpose of transporting a dead

human body to another state without being in violation of Title 58, Chapter 9. However, the person shall comply with the Utah Vital Statistics Rules of the Utah Department of Health and any other statute or rule regulated by the Utah Department of Health.

(2) All licensed funeral service directors, who release a dead human body to such persons, are responsible to insure that the out of state persons and their staff comply with the Utah Vital Statistics Rules of the Utah Department of Health.

R156-9-502. Unprofessional Conduct.

"Unprofessional conduct" as defined in Title 58, Chapters 1 and 9, is further defined in accordance with Subsection 58-1-203(1)(e) to include:

(1) violating the ethical standards of the profession;

(2) failing to comply with laws and rules established by any local, state, federal or other authority regarding funeral services, preneed contracts, health, safety, sanitation, regarding funeral establishments or transportation or handling of dead human bodies, or disclosure requirements to purchasers or prospective purchasers of funeral services or preneed contract;

(3) failing to comply with any provision of the Title 58, Chapter 9, Funeral Service Licensing Act or this Funeral Service Licensing Act Rule;

(4) failing to comply with the disclosure requirements of the Federal Trade Commission;

(5) failing to accurately report and record information required by law to be reported on a death certificate;

(6) solicitation or the direct or indirect offer to pay a commission for the procurement of dead human bodies;

(7) failing to comply with the Utah Vital Statistics Rules as promulgated by the Utah Department of Health;

(8) selling preneed funeral arrangements by a preneed funeral arrangement sales agent when the sales agent is not associated with or employed by a funeral service establishment;

(9) selling a preneed funeral arrangement when the preneed funeral arrangement sales agent has not obtained approval to do so from the funeral service establishment and the contract is not approved by the supervising funeral director;

(10) selling an insurance policy to fund a preneed funeral arrangement contract naming a funeral service establishment as beneficiary, prior to executing the underlying preneed funeral arrangement contract;

(11) selling a preneed funeral arrangement without executing an approved preneed funeral arrangement contract within ten working days following the sale;

(12) failing to notify the Division of the beginning or ending of association or employment of a preneed funeral arrangement sales agent;

(13) exercising undue influence over a consumer thereby requiring or causing the consumer to purchase goods or services beyond those the consumer desires or needs;

(14) collecting or receiving money from the sale of an insurance policy funding a preneed funeral arrangement contract unless the person is collecting or receiving the money as a licensed insurance agent or broker;

(15) violating Title 31A, Chapter 23a, containing the fiduciary duties of a trustee with respect to money collected or received as a licensed insurance agent or broker;

(16) receiving a death benefit payment of life insurance proceeds beyond the funeral service establishment's insurable interest in the recipient of goods and services specified in a preneed contract, unless the excess is promptly returned to the insurance company or paid to those entitled to the funds;

(17) converting a preneed funeral arrangement funded by money placed in trust to insurance except as provided by this rule;

(18) failing to provide guaranteed goods and services at time of need in accordance with the terms of a preneed funeral

arrangement contract;

(19) retaining life insurance proceeds of a policy purchased to fund funeral arrangements but not accompanied by a preneed funeral arrangement contract, unless the licensee provides an equivalent value of funeral goods and services;

(20) failing to report known violations of governing law or rules to the Division and to appropriate law enforcement or other appropriate agencies; and

(21) failing to handle, remit or deposit funds received in payment for a preneed funeral arrangement contract by placing the funds in trust or remitting the funds to an insurance carrier as is required by the contract terms and conditions and by all laws and rules regulating the sale of preneed funeral arrangements and insurance and annuity policies.

R156-9-604. Affiliation of Licensed Sales Agent with Licensed Funeral Service Establishment.

(1) When a licensed sales agent enters association with a licensed funeral service establishment and such association is not currently registered with the Division under the provisions of Subsection 58-9-302(3)(d), or this subsection, the licensed funeral service establishment shall file a notice of association with the Division on forms provided by the Division within ten days after commencement of association.

(2) The licensed funeral service establishment shall provide the licensed sales agent with a copy of the notice filed with the Division.

(3) If a notice of association is not filed by the licensed funeral service establishment within ten days after association, the sales agent may not represent the licensed funeral service establishment with respect to any preneed funeral arrangement until such notice is filed.

R156-9-605. Licensure of Persons Selling Preneed Funeral Arrangements to be Funded by Proceeds from Insurance or Annuity Policy.

(1) Any person who sells or represents that they will or intend to sell specific funeral goods or services, represents that goods or services will be provided by a specific funeral establishment, represents that specified amount of money will purchase defined funeral goods or services, or represents that payment for those goods or services to be provided at some future date shall be accomplished through the purchase of a life insurance policy or annuity policy, is engaged in the sale of a preneed funeral arrangement and is required to be licensed as a funeral service establishment or sales agent.

(2) Any person who sells or represents that they will or intend to sell an insurance or annuity policy which will provide a certain benefit at time of death, represents that such benefit will be available to pay for funeral arrangements and no reference is made to specific funeral goods or services, to the cost of specific funeral goods or services, or to the services of a specific funeral service establishment, is not engaged in the sale of a preneed funeral arrangement and is not required to be licensed as a funeral service establishment or preneed sales agent.

(3) Nothing in this section shall be interpreted to affect or modify any requirement under state law regarding licensure of persons engaged in the sale of insurance or annuity policies.

R156-9-606. Preneed Funeral Arrangement Contracts Funded by Insurance or Annuity Policy.

(1) The beneficiary designation on any insurance or annuity policy sold to fund a preneed funeral arrangement contract shall be a contingent designation using such wording as "as their interests may appear under a funeral arrangement contract" with information identifying the funeral arrangement contract, or other substantially equivalent beneficiary designation language.

(2) Monies received by a licensee in payment for an insurance or annuity policy sold to fund a preneed funeral arrangement contract shall be handled in accordance with the contractual terms and conditions of the policy and the insurance laws applicable to the policy.

R156-9-607. Contract Forms - Division Model.

(1) To assist applicants for a funeral service establishment license, the Division shall publish a model guaranteed preneed funeral arrangement contract form which meets the requirements of Section 58-9-701.

(2) In accordance with the provisions of Subsection 58-9-302(3)(e), a funeral service establishment must submit to the Division a copy of the preneed contract form it intends to market for initial licensure and then ensure that if any amendments are made to the preneed section in the future, the amendments shall meet the requirements set forth in Section 58-9-701 before the contract form may be used in marketing the licensee's preneed funeral arrangement plan under that contract form.

(3) In accordance with the provisions of Subsection 58-9-701(2)(a), easy-to-read type size is hereby defined to be of a type size large enough to accommodate no more than six lines per vertical inch and no more than 15 characters per horizontal inch.

(4) After April 30, 2007, a new preneed contract form is not required to contain a clause indicating that the Division has approved the contract. Preneed contract forms approved prior to April 30, 2007 shall continue to contain a clause indicating approval by the Division.

R156-9-608. Contract Notice Regarding Medicaid.

The following notice shall appear in all preneed contracts: "Notice: Under Federal regulations, a Medicaid recipient whose preneed contract is revoked, canceled, or mutually rescinded may become ineligible for Medicaid benefits. Before permitting or causing your preneed agreement to be revoked, canceled or rescinded, you should seek the advice of an attorney or a Medicaid representative."

R156-9-609. Retention of Completed or Terminated Contracts.

Contracts shall be maintained for a period of five years after the contracts have been serviced and obligations of the funeral service establishment have been completed, or after the contracts have been otherwise terminated. The contracts shall be filed and maintained with a copy of the death certification or burial transit permit with respect to those contracts for which services have been provided, and with sufficient documentation to clearly identify the basis for termination of otherwise terminated.

R156-9-610. Cash Advance Item Prohibited Unless a Guaranteed Product.

A cash advance item as defined in 16 CFR Part 453, Funeral Industry Practices Trade Regulation Rule, of the Federal Trade Commission is prohibited in a preneed funeral arrangement contract unless the item is a guaranteed product permitting the contract to meet the requirements of Subsection 58-9-701(2)(d).

R156-9-611. Use of Funds in Trust Account to Purchase Insurance or Annuity Policy.

A funeral service establishment may convert a contract funded by monies held in trust with a contract funded by the proceeds from an insurance or annuity policy provided:

(1) the buyer consents in writing to the conversion after full disclosure of the consequences of the transaction in writing by the funeral service establishment;

(2) the buyer's consent is given without coercion, threat, concealment of material fact, undue influence, or other prejudicial influence inconsistent with the buyer's best interest;

(3) the funeral service establishment uses all monies held in the individual trust account, including interest, as premium for the purchase of the life insurance or annuity policy, unless otherwise directed in writing by the buyer;

(4) the new preneed funeral arrangement contract must be in writing and must provide for goods and services which at least equal to those required of the funeral service establishment under the original contract, and

(5) the new contract meets all requirements of Title 58, Chapter 9, and this rule.

R156-9-612. Conversion of Trust Accounts Under Prior Law Prohibited.

Conversion of funds held in trust which was established under any prior law regulating preneed funeral arrangements, may not be converted to a trust under the provisions of current statute and rules, but shall continue to be held in trust under the terms and conditions of the predecessor law. However, the funeral service establishment is required to file reports with the Division as required under this rule.

R156-9-613. Prohibition Against Provider Accepting Payment in a Form Other Than Cash, Cash Equivalents, or Negotiable Instruments.

A funeral service establishment may accept in payment for a preneed funeral arrangement contract only cash, cash equivalents, or negotiable instruments which are readily convertible to cash.

R156-9-614. Funeral Service Establishment Expenditure of Earnings from Trust Account.

(1) In accordance with Subsection 58-9-704(1), earnings of a preneed funeral arrangement trust account shall be available to the funeral service establishment for expenditure toward reasonable trustee expenses of administering a trust account, not to exceed the lesser of the earnings remaining in the trust account or 1% of the entire trust account, plus any amounts necessary to pay taxes incurred on the entire trust account's earnings.

(2) In accordance with Subsection 58-9-704(2), earnings of an individual account within the trust shall be available to the funeral service establishment for expenditure toward other authorized reasonable funeral service establishment expenses incurred against the individual account, not to exceed earnings totaling 30% of the sales amount of the respective preneed funeral arrangement contract.

(3) Remaining earnings of individual accounts within the trust shall, except as provided in Subsection 58-9-704(3), remain in each individual account within the trust to pay by account, the costs of providing the goods and services required under respective preneed funeral arrangement contracts.

R156-9-615. Maximum Life Insurance Proceeds Payable to Funeral Service Establishment.

(1) Preneed life insurance proceeds payable to a funeral service provider shall not exceed the funeral service establishment's insurable interest in the recipient of goods and services which, by definition, shall not exceed the funeral service establishment's current retail price for the goods and services provided, as determined by the funeral service establishment's price list in effect at the recipient of goods and service's death.

(2) Excess preneed life insurance proceeds not paid to the funeral service establishment shall be returned to the owner of the life insurance policy or his heirs and beneficiaries unless otherwise designated by the owner or his heirs and beneficiaries.

R156-9-616. Reporting Requirements.

(1) In accordance with Sections 58-9-504 and 58-9-706, each funeral service establishment shall maintain an annual report at the establishment which shall be subject to Division audit at anytime. The annual report shall be maintained in a format set forth by the Division and shall include:

(a) a statement of compliance certifying:

(i) that all payments received from the sale of contracts have been:

(A) placed in the funeral service establishment's trust account in accordance with Section 58-9-702 and administered in accordance with Sections 58-9-703 through 58-9-705 and this rule; or

(B) submitted to the insurance company whose insurance or annuity policy funds the contract;

(ii) that complete and accurate information concerning the preneed funeral arrangements by the funeral service establishment or the funeral service establishment's sales agent was furnished or made available to the independent certified public accountant who prepared the report of agreed upon procedures; and

(iii) that the annual report is complete and accurate;

(b) at least one of the following reports which reconciles balances in all trust accounts and insurance policies to those in the annual report:

(i) a report from a bank trust department;

(ii) a report from a licensed insurance company; or

(iii) an accounting report on forms available from the Division, completed by an independent certified public accountant (CPA) licensed pursuant to Title 58, Chapter 26a, which report indicates the procedures used and agreed upon by the CPA and the funeral service establishment.

(c) an exhibit listing preneed contracts sold prior to April 29, 1991, funded by money, 75% of which is required to be maintained in the name of the contract buyer in the funeral service establishment's trust account as provided in Section 58-9-703, which shall include at a minimum: the contract number, date, amount, the recipient of goods and services and buyer if different, and balance due; the individual trust account number and amount trusted; and the trust earnings, earnings used, and trust balance;

(d) an exhibit listing preneed contracts sold after April 28, 1991, funded by money, 100% of which is required to be maintained in the name of the contract buyer in the funeral service establishment's trust account as provided in Section 58-9-703, which shall include at a minimum the information required under subsection (c);

(e) an exhibit listing preneed contracts funded by money placed in trust which were serviced, revoked, rescinded, or amended since the last reporting period, which shall include at a minimum: the contract number, date, amount, the recipient of goods and services and buyer if different; the individual trust account number and trust balance at the recipient of goods and service's death; the date the contract was closed; and an explanation regarding any preneed contract closed but not serviced;

(f) an exhibit listing preneed contracts sold after April 28, 1991, funded in whole or in part by insurance, which shall include at a minimum: the contract number, date, amount, recipient of goods and services and buyer if different; the insurance company; the policy number, policy holder, and face amount; and

(g) an exhibit listing preneed contracts funded by insurance which were serviced, revoked, rescinded, or otherwise amended since the last reporting period, which shall include at a minimum: the contract number, date, amount, the recipient of goods and services, and buyer if different; the insurance company; the policy number and policy holder; the policy proceeds; the date the contract was closed; and an explanation

regarding any preneed contract closed but not serviced.

R156-9-617. Maximum Revocation Fee.

If a buyer revokes or defaults under a guaranteed preneed funeral arrangement contract, the funeral service establishment may retain a revocation fee from the trust corpus, not to exceed 25% of the amount received from the sale of the contract and trust earnings thereupon, provided the revocation fee is clearly identified in the contract.

R156-9-618. Goods and Services Not Provided - Refund.

If goods or services selected in the preneed contract are not provided at the time of need, the amount paid for those goods and services and any unexpended earnings thereupon will be distributed to the preneed contract buyer or the buyer's representative or in their absence, the buyer's heirs and beneficiaries.

**KEY: funeral industries, licensing, funeral directors,
preneed funeral arrangements**

October 9, 2014

Notice of Continuation April 26, 2016

58-1-106(1)(a)

58-1-202(1)(a)

58-9-504

R156. Commerce, Occupational and Professional Licensing.**R156-17b. Pharmacy Practice Act Rule.****R156-17b-101. Title.**

This rule is known as the "Pharmacy Practice Act Rule".

R156-17b-102. Definitions.

In addition to the definitions in Title 58, Chapters 1 and 17b, as used in Title 58, Chapters 1 and 17b or this rule:

- (1) "Accredited by ASHP" means a program that:
 - (a) was accredited by the ASHP on the day the applicant for licensure completed the program; or
 - (b) was in ASHP candidate status on the day the applicant for licensure completed the program.
- (2) "ACPE" means the American Council on Pharmaceutical Education or Accreditation Council for Pharmacy Education.
- (3) "Analytical laboratory":
 - (a) means a facility in possession of prescription drugs for the purpose of analysis; and
 - (b) does not include a laboratory possessing prescription drugs used as standards and controls in performing drug monitoring or drug screening analysis if the prescription drugs are pre-diluted in a human or animal body fluid, human or animal body fluid components, organic solvents, or inorganic buffers at a concentration not exceeding one milligram per milliliter when labeled or otherwise designated as being for in-vitro diagnostic use.
- (4) "ASHP" means the American Society of Health System Pharmacists.
- (5) "Authorized distributor of record" means a pharmaceutical wholesaler with whom a manufacturer has established an ongoing relationship to distribute the manufacturer's prescription drugs. An ongoing relationship is deemed to exist between such pharmaceutical wholesaler and a manufacturer, as defined in Section 1504 of the Internal Revenue Code, when the pharmaceutical wholesaler has a written agreement currently in effect with the manufacturer evidencing such ongoing relationship, and the pharmaceutical wholesaler is listed on the manufacturer's current list of authorized distributors of record.
- (6) "Authorized personnel" means any person who is a part of the pharmacy staff who participates in the operational processes of the pharmacy and contributes to the natural flow of pharmaceutical care.
- (7) "Centralized Prescription Filling" means the filling by a pharmacy of a request from another pharmacy to fill or refill a prescription drug order.
- (8) "Centralized Prescription Processing" means the processing by a pharmacy of a request from another pharmacy to fill or refill a prescription drug order or to perform processing functions such as dispensing, drug utilization review (DUR), claims adjudication, refill authorizations, and therapeutic interventions.
- (9) "Chain pharmacy warehouse" means a physical location for prescription drugs that acts as a central warehouse and performs intracompany sales or transfers of the prescription drugs to a group of chain pharmacies that have the same common ownership and control.
- (10) "Co-licensed partner" means a person that has the right to engage in the manufacturing or marketing of a co-licensed product.
- (11) "Co-licensed product" means a device or prescription drug for which two or more persons have the right to engage in the manufacturing, marketing, or both consistent with FDA's implementation of the Prescription Drug Marketing Act as applicable.
- (12) "Cooperative pharmacy warehouse" means a physical location for drugs that acts as a central warehouse and is owned, operated or affiliated with a group purchasing organization

(GPO) or pharmacy buying cooperative and distributes those drugs exclusively to its members.

(13) "Counterfeit prescription drug" has the meaning given that term in 21 USC 321(g)(2), including any amendments thereto.

(14) "Counterfeiting" means engaging in activities that create a counterfeit prescription drug.

(15) "Dispense", as defined in Subsection 58-17b-102(22), does not include transferring medications for a patient from a legally dispensed prescription for that particular patient into a daily or weekly drug container to facilitate the patient taking the correct medication.

(16) "Device" means an instrument, apparatus, implement, machine, contrivance, implant, or other similar or related article, including any component part or accessory, which is required under Federal law to bear the label, "Caution: Federal or State law requires dispensing by or on the order of a physician."

(17) "DMP" means a dispensing medical practitioner licensed under Section 58-17b, Part 8.

(18) "DMP designee" means an individual, acting under the direction of a DMP, who:

(a)(i) holds an active health care professional license under one of the following chapters:

- (A) Chapter 67, Utah Medical Practice Act;
- (B) Chapter 68, Utah Osteopathic Medical Practice Act;
- (C) Chapter 70a, Physician Assistant Act;
- (D) Chapter 31b, Nurse Practice Act;
- (E) Chapter 16a, Utah Optometry Practice Act;
- (F) Chapter 44a, Nurse Midwife Practice Act; or
- (G) Chapter 17b, Pharmacy Practice Act; or

(ii) is a medical assistant as defined in Subsection 58-67-102 (9);

(b) meets requirements established in Subsection 58-17b-803 (4)(c); and

(c) can document successful completion of a formal or on-the-job dispensing training program that meets standards established in Section R156-17b-622.

(19) "DMPIC" means a dispensing medical practitioner licensed under Section 58-17b, Part 8 who is designated by a dispensing medical practitioner clinic pharmacy to be responsible for activities of the pharmacy.

(20) "Drop shipment" means the sale of a prescription drug to a pharmaceutical wholesaler by the manufacturer of the drug; by the manufacturer's co-licensed product partner, third party logistics provider, or exclusive distributor; or by an authorized distributor of record that purchased the product directly from the manufacturer or from one of these entities; whereby:

(a) the pharmaceutical wholesale distributor takes title to but not physical possession of such prescription drug;

(b) the pharmaceutical wholesale distributor invoices the pharmacy, pharmacy warehouse, or other person authorized by law to dispense to administer such drug; and

(c) the pharmacy, pharmacy warehouse, or other person authorized by law to dispense or administer such drug receives delivery of the prescription drug directly from the manufacturer; from the co-licensed product partner, third party logistics provider, or exclusive distributor; or from an authorized distributor of record that purchases the product directly from the manufacturer or from one of these entities.

(21) "Drug therapy management" means the review of a drug therapy regimen of a patient by one or more pharmacists for the purpose of evaluating and rendering advice to one or more practitioners regarding adjustment of the regimen.

(22) "Drugs", as used in this rule, means drugs or devices.

(23) "Durable medical equipment" or "DME" means equipment that:

(a) can withstand repeated use;

(b) is primarily and customarily used to serve a medical

purpose;

(c) generally is not useful to a person in the absence of an illness or injury;

(d) is suitable for use in a health care facility or in the home; and

(e) may include devices and medical supplies.

(24) "Entities under common administrative control" means an entity holds the power, actual as well as legal to influence the management, direction, or functioning of a business or organization.

(25) "Entities under common ownership" means entity assets are held indivisibly rather than in the names of individual members.

(26) "ExCPT", as used in this rule, means the Exam for the Certification of Pharmacy Technicians.

(27) "FDA" means the United States Food and Drug Administration and any successor agency.

(28) "FDA-approved" means the federal Food, Drug, and Cosmetic Act, 21 U.S.C.A. Section 301 et seq. and regulations promulgated thereunder permit the subject drug or device to be lawfully manufactured, marketed, distributed, and sold.

(29) "High-risk, medium-risk, and low-risk drugs" refers to the risk to a patient's health from compounding sterile preparations, as referred to in USP-NF Chapter 797, for details of determining risk level.

(30) "Hospice facility pharmacy" means a pharmacy that supplies drugs to patients in a licensed healthcare facility for terminal patients.

(31) "Hospital clinic pharmacy" means a pharmacy that is located in an outpatient treatment area where a pharmacist or pharmacy intern is compounding, admixing, or dispensing prescription drugs, and where:

(a) prescription drugs or devices are under the control of the pharmacist, or the facility for administration to patients of that facility;

(b) prescription drugs or devices are dispensed by the pharmacist or pharmacy intern; or

(c) prescription drugs are administered in accordance with the order of a practitioner by an employee or agent of the facility.

(32) "Legend drug" or "prescription drug" means any drug or device that has been determined to be unsafe for self-medication or any drug or device that bears or is required to bear the legend:

(a) "Caution: federal law prohibits dispensing without prescription";

(b) "Caution: federal law restricts this drug to use by or on the order of a licensed veterinarian"; or

(c) "Rx only".

(33) "Maintenance medications" means medications the patient takes on an ongoing basis.

(34) "Manufacturer's exclusive distributor" means an entity that contracts with a manufacturer to provide or coordinate warehousing, distribution, or other services on behalf of a manufacturer and who takes title to that manufacturer's prescription drug, but who does not have general responsibility to direct the drug's sale or disposition. Such manufacturer's exclusive distributor shall be licensed as a pharmaceutical wholesaler under this chapter and be an "authorized distributor of record" to be considered part of the "normal distribution channel".

(35) "Medical supplies" means items for medical use that are suitable for use in a health care facility or in the home and that are disposable or semi-disposable and are non-reusable.

(36) "MPJE" means the Multistate Jurisprudence Examination.

(37) "NABP" means the National Association of Boards of Pharmacy.

(38) "NAPLEX" means North American Pharmacy

Licensing Examination.

(39) "Normal distribution channel" means a chain of custody for a prescription drug that goes directly, by drop shipment as defined in Subsection (19), or via intracompany transfer from a manufacturer; or from the manufacturer's co-licensed partner, third-party logistics provider, or the exclusive distributor to:

(a) a pharmacy or other designated persons authorized under this chapter to dispense or administer prescription drugs to a patient;

(b) a chain pharmacy warehouse that performs intracompany sales or transfers of such drugs to a group of pharmacies under common ownership and control;

(c) a cooperative pharmacy warehouse to a pharmacy that is a member of the pharmacy buying cooperative or GPO to a patient;

(d) an authorized distributor of record, and then to either a pharmacy or other designated persons authorized under this chapter to dispense or administer such drug for use by a patient;

(e) an authorized distributor of record, and then to a chain pharmacy warehouse that performs intracompany sales or transfers of such drugs to a group of pharmacies under common ownership and control; or

(f) an authorized distributor of record to another authorized distributor of record to a licensed pharmaceutical facility or a licensed healthcare practitioner authorized under this chapter to dispense or administer such drug for use by a patient.

(40) "Other health care facilities" means any entity as defined in Utah Code Subsection 26-21-2(13)(a) or Utah Administrative Code R432-1-3(55).

(41) "Parenteral" means a method of drug delivery injected into body tissues but not via the gastrointestinal tract.

(42) "Patient's agent" means a:

(a) relative, friend or other authorized designee of the patient involved in the patient's care; or

(b) if requested by the patient or the individual under Subsection (40)(a), one of the following facilities:

(i) an office of a licensed prescribing practitioner in Utah;

(ii) a long-term care facility where the patient resides; or

(iii) a hospital, office, clinic or other medical facility that provides health care services.

(43) "Pedigree" means a document or electronic file containing information that records each distribution of any given prescription drug.

(44) "PIC", as used in this rule, means the pharmacist-in-charge.

(45) "Prepackaged" or "Prepackaging" means the act of transferring a drug, manually or by use of an automated pharmacy system, from a manufacturer's or distributor's original container to another container in advance of receiving a prescription drug order or for a patient's immediate need for dispensing by a pharmacy or practitioner authorized to dispense in the establishment where the prepackaging occurred.

(46) "Prescription files" means all hard-copy and electronic prescriptions that includes pharmacist notes or technician notes, clarifications or information written or attached that is pertinent to the prescription.

(47) "PTCB" means the Pharmacy Technician Certification Board.

(48) "Qualified continuing education", as used in this rule, means continuing education that meets the standards set forth in Section R156-17b-309.

(49) "Refill" means to fill again.

(50) "Repackage" means repackaging or otherwise changing the container, wrapper, or labeling to further the distribution of a prescription drug, excluding that completed by the pharmacist or DMP responsible for dispensing the product to a patient.

(51) "Research facility" means a facility where research takes place that has policies and procedures describing such research.

(52) "Reverse distributor" means a person or company that retrieves unusable or outdated drugs from a pharmacy for the purpose of removing those drugs from stock and destroying them.

(53) "Sterile products preparation facility" means any facility, or portion of the facility, that compounds sterile products using aseptic technique.

(54) "Supervisor" means a licensed pharmacist or DMP in good standing with the Division.

(55) "Third party logistics provider" means anyone who contracts with a prescription drug manufacturer to provide or coordinate warehousing, distribution, or other similar services on behalf of a manufacturer, but does not take title to the prescription drug or have any authoritative control over the prescription drug's sale. Such third party logistics provider shall be licensed as a pharmaceutical wholesaler under this chapter and be an "authorized distributor of record" to be considered part of the "normal distribution channel".

(56) "Unauthorized personnel" means any person who is not participating in the operational processes of the pharmacy who in some way would interrupt the natural flow of pharmaceutical care.

(57) "Unit dose" means the ordered amount of a drug in a dosage form prepared for a one-time administration to an individual and indicates the name, strength, lot number and beyond use date for the drug.

(58) "Unprofessional conduct", as defined in Title 58, Chapters 1 and 17b, is further defined, in accordance with Subsection 58-1-203(1)(e), in Section R156-17b-502.

(59) "USP-NF" means the United States Pharmacopeia-National Formulary (USP 39-NF 34), 2016 edition, which is official from May 1, 2016 through Supplement 2, dated December 1, 2015, which is hereby adopted and incorporated by reference.

(60) "Wholesaler" means a wholesale distributor who supplies or distributes drugs or medical devices that are restricted by federal law to sales based on the order of a physician to a person other than the consumer or patient.

(61) "Wholesale distribution" means the distribution of drugs to persons other than consumers or patients, but does not include:

- (a) intracompany sales or transfers;
- (b) the sale, purchase, distribution, trade, or other transfer of a prescription drug for emergency medical reasons, as defined under 21 CFR 203.3(m), including any amendments thereto;
- (c) the sale, purchase, or trade of a drug pursuant to a prescription;
- (d) the distribution of drug samples;
- (e) the return or transfer of prescription drugs to the original manufacturer, original wholesale distributor, reverse distributor, or a third party returns processor;
- (f) the sale, purchase, distribution, trade, or transfer of a prescription drug from one authorized distributor of record to one additional authorized distributor of record during a time period for which there is documentation from the manufacturer that the manufacturer is able to supply a prescription drug and the supplying authorized distributor of record states in writing that the prescription drug being supplied had until that time been exclusively in the normal distribution channel;
- (g) the sale, purchase or exchange of blood or blood components for transfusions;
- (h) the sale, transfer, merger or consolidation of all or part of the business of a pharmacy;
- (i) delivery of a prescription drug by a common carrier; or
- (j) other transactions excluded from the definition of "wholesale distribution" under 21 CFR 203.3 (cc), including any

amendments thereto.

R156-17b-103. Authority - Purpose.

This rule is adopted by the Division under the authority of Subsection 58-1-106(1)(a) to enable the Division to administer Title 58, Chapter 17b.

R156-17b-104. Organization - Relationship to Rule R156-1.

The organization of this rule and its relationship to Rule R156-1 is as described in Section R156-1-107.

R156-17b-105. Licensure - Administrative Inspection.

In accordance with Subsection 58-17b-103(3)(f), the procedure for disposing of any drugs or devices seized by the Division during an administrative inspection shall be handled as follows:

(1) Any legal drugs or devices found and temporarily seized by the Division that are found to be in compliance with this chapter shall be returned to the PIC or DMPIC of the pharmacy involved at the conclusion of any investigative or adjudicative proceedings and appeals.

(2) Any drugs or devices that are temporarily seized by the Division that are found to be unlawfully possessed, adulterated, misbranded, outdated, or otherwise in violation of this rule shall be destroyed by Division personnel at the conclusion of any investigative or adjudicative proceedings and appeals. The destruction of any seized controlled substance drugs shall be witnessed by two Division individuals. A controlled substance destruction form shall be completed and retained by the Division.

(3) An investigator may, upon determination that the violations observed are of a nature that pose an imminent peril to the public health, safety and welfare, recommend to the Division Director to issue an emergency licensure action, such as cease and desist.

(4) In accordance with Subsections 58-17b-103(1) and 58-17b-601(1), a secure email address must be established by the PIC or DMPIC and responsible party for the pharmacy to be used for self-audits or pharmacy alerts initiated by the Division. The PIC or DMPIC and responsible party shall cause the Division's Licensing Bureau to be notified on the applicable form prescribed by the Division of the secure email address or any change thereof within seven days of any email address change. Only one email address shall be used for each pharmacy.

R156-17b-302. Pharmacy Licensure Classifications - Pharmacist-in-Charge or Dispensing Medical Practitioner-In-Charge Requirements.

In accordance with Subsection 58-17b-302(4), the classification of pharmacies holding licenses are clarified as:

(1) A Class A pharmacy includes all retail operations located in Utah and requires a PIC.

(2) A Class B pharmacy includes an institutional pharmacy that provides services to a target population unique to the needs of the healthcare services required by the patient. All Class B pharmacies require a PIC or DMPIC except for pharmaceutical administration facilities and methadone clinics. Examples of Class B pharmacies include:

- (a) closed door pharmacies;
- (b) hospital clinic pharmacies;
- (c) methadone clinic pharmacies;
- (d) nuclear pharmacies;
- (e) branch pharmacies;
- (f) hospice facility pharmacies;
- (g) veterinarian pharmaceutical facility pharmacies;
- (h) pharmaceutical administration facility pharmacies;
- (i) sterile product preparation facility pharmacies; and
- (j) dispensing medical practitioner clinic pharmacies.

(3) A Class C pharmacy includes a pharmacy that is involved in:

- (a) manufacturing;
- (b) producing;
- (c) wholesaling;
- (d) distributing; or
- (e) reverse distributing.

(4) A Class D pharmacy requires a PIC licensed in the state where the pharmacy is located and includes an out-of-state mail order pharmacy. Facilities with multiple locations shall have licenses for each facility and each component part of a facility.

(5) A Class E pharmacy does not require a PIC and includes:

- (a) analytical laboratory pharmacies;
- (b) animal control pharmacies;
- (c) durable medical equipment provider pharmacies;
- (d) human clinical investigational drug research facility pharmacies;
- (e) medical gas provider pharmacies; and
- (f) animal narcotic detection training facility pharmacies.

(6) All pharmacy licenses shall be converted to the appropriate classification by the Division as identified in Section 58-17b-302.

(7) Each Class A and each Class B pharmacy required to have a PIC or DMPIC shall have one PIC or DMPIC who is employed on a full-time basis as defined by the employer, who acts as a PIC or DMPIC for one pharmacy. However, the PIC or DMPIC may be the PIC or DMPIC of more than one Class A or Class B pharmacy, if the additional Class A or Class B pharmacies are not open to provide pharmacy services simultaneously.

(8) A PIC or DMPIC shall comply with the provisions of Section R156-17b-603.

R156-17b-303a. Qualifications for Licensure - Education Requirements.

(1) In accordance with Subsections 58-17b-303(2) and 58-17b-304(7)(b), the credentialing agency recognized to provide certification and evaluate equivalency of a foreign educated pharmacy graduate is the Foreign Pharmacy Graduate Examination Committee (FPGEC) of the National Association of Boards of Pharmacy Foundation.

(2) In accordance with Subsection 58-17b-304(7), an applicant for a pharmacy intern license shall demonstrate that he meets one of the following education criteria:

- (a) current admission in a College of Pharmacy accredited by the ACPE by written verification from the Dean of the College;
- (b) a graduate degree from a school or college of pharmacy that is accredited by the ACPE; or
- (c) a graduate degree from a foreign pharmacy school as established by a certificate of equivalency from an approved credentialing agency defined in Subsection (1).

(3) In accordance with Subsection 58-17b-305(1)(f), a pharmacy technician shall complete a training program that is:

- (a) accredited by ASHP; or
- (b) conducted by:
 - (i) the National Pharmacy Technician Association;
 - (ii) Pharmacy Technicians University; or
 - (iii) a branch of the Armed Forces of the United States,

and

(c) meets the following standards:

(i) completion of at least 180 hours of directly supervised practical training in a licensed pharmacy as determined appropriate by a licensed pharmacist in good standing; and

(ii) written protocols and guidelines for the teaching pharmacist outlining the utilization and supervision of pharmacy technician trainees that address:

(A) the specific manner in which supervision will be completed; and

(B) an evaluative procedure to verify the accuracy and completeness of all acts, tasks and functions performed by the pharmacy technician trainee.

(4) An individual shall complete a pharmacy technician training program and successfully pass the required examination as listed in Subsection R156-17b-303c(4) within two years after obtaining a pharmacy technician trainee license, unless otherwise approved by the Division in collaboration with the Board for good cause showing exceptional circumstances.

(a) Unless otherwise approved under Subsection (4), an individual who fails to apply for and obtain a pharmacy technician license within the two-year time frame shall repeat a pharmacy technician training program in its entirety if the individual pursues licensure as a pharmacy technician.

(5)(a) Pharmacy technician training programs that received Division approval on or before April 30, 2014 are exempt from satisfying standards established in Subsection R156-17b-303a(3) for students enrolled on or before December 31, 2018.

(b) A student in a program described in Subsection (5)(a) shall comply with the program completion deadline and testing requirements in Subsection (4), except that the license application shall be submitted to the Division no later than December 31, 2021.

(c) A program in ASHP candidate status shall notify a student prior to enrollment that if the program is denied accreditation status while the student is enrolled in the program, the student will be required to complete education in another program with no assurance of how many credits will transfer to the new program.

(d) A program in ASHP candidate status that is denied accreditation shall immediately notify the Division, enrolled students and student practice sites, of the denial. The notice shall instruct each student and practice site that:

(i) the program no longer satisfies the pharmacy technician license education requirement in Utah; and

(ii) enrollment in a different program meeting requirements established in Subsection R156-17b-303a(3) is necessary for the student to complete training and to satisfy the pharmacy technician license education requirement in Utah.

(6) An applicant from another jurisdiction seeking licensure as a pharmacy technician in Utah is deemed to have met the qualifications for licensure in Subsection 58-17b-305(1)(f) and 58-17b-305(1)(g) if the applicant:

(a) has engaged in the practice of a pharmacy technician for a minimum of 1,000 hours in that jurisdiction within the past two years or has equivalent experience as approved by the Division in collaboration with the Board; and

(b) has passed and maintained current PTCB or ExCPT certification.

R156-17b-303b. Licensure - Pharmacist - Pharmacy Internship Standards.

(1) In accordance with Subsection 58-17b-303(1)(g), the standards are established as one of the following for the pharmacy internship required for licensure as a pharmacist:

(a) For graduates of all U.S. pharmacy schools:

(i) At least 1,740 hours of practice supervised by a pharmacy preceptor shall be obtained in Utah or another state or territory of the United States, or a combination of both according to the Accreditation Council for Pharmacy Education (ACPE), Accreditation Standards and Guidelines for the Professional Program in Pharmacy Leading to the Doctor of Pharmacy Degree Guidelines Version 2.0 Effective February 14, 2011, which is hereby incorporated by reference.

(ii) Introductory pharmacy practice experiences (IPPE) shall account for not less than 300 hours over the first three professional years.

(iii) A minimum of 150 hours shall be balanced between community pharmacy and institutional health system settings.

(iv) Advanced pharmacy practice experiences (APPE) shall include at least 1,440 hours (i.e., 36 weeks) during the last academic year and after all IPPE requirements are completed.

(v) Required experiences shall:

(A) include primary, acute, chronic, and preventive care among patients of all ages; and

(B) develop pharmacist-delivered patient care competencies in the community pharmacy, hospital or health-system pharmacy, ambulatory care, inpatient/acute care, and general medicine settings.

(vi) Internship hours completed in another state or territory of the United States shall be accepted based on the approval of the hours by the pharmacy board in the jurisdiction where the hours were obtained.

(vii) Evidence of completed internship hours shall be documented to the Division by the pharmacy intern at the time application is made for a Utah pharmacist license.

(viii) Pharmacy interns participating in internships may be credited no more than 50 hours per week of internship experience.

(ix) No credit will be awarded for didactic experience.

(x) If a pharmacy intern is suspended or dismissed from an approved College of Pharmacy, the intern shall notify the Division within 15 days of the suspension or dismissal.

(xi) If a pharmacy intern ceases to meet all requirements for intern licensure, the pharmacy intern shall surrender the pharmacy intern license to the Division within 60 days unless an extension is requested and granted by the Division in collaboration with the Board.

(b) For graduates of all foreign pharmacy schools, at least 1,440 hours of supervised pharmacy practice in the United States.

R156-17b-303c. Qualifications for Licensure - Examinations.

(1) In accordance with Subsection 58-17b-303(1)(h), the examinations that shall be successfully passed by an applicant for licensure as a pharmacist are:

(a) the NAPLEX with a passing score as established by NABP; and

(b) the Multistate Pharmacy Jurisprudence Examination (MPJE) with a minimum passing score as established by NABP.

(2) An individual who has failed either examination twice shall meet with the Board to request an additional authorization to test. The Division, in collaboration with the Board, may require additional training as a condition for approval of an authorization to retest.

(3) In accordance with Subsection 58-17b-303(3)(j), an applicant applying by endorsement is required to pass the MPJE.

(4) In accordance with Subsection 58-17b-305(1)(g), an applicant applying for licensure as a pharmacy technician shall pass the PTCB or ExCPT with a passing score as established by the certifying body. The certificate shall exhibit a valid date and that the certification is active.

(5) A graduate of a foreign pharmacy school shall obtain a passing score on the Foreign Pharmacy Graduate Examination Committee (FPGEC) examination.

R156-17b-303d. Qualifications for Licensure - Meet with the Board.

In accordance with Subsections 58-1-202(1)(d) and 58-1-301(3), an applicant for licensure under Title 58, Chapter 17b may be required to meet with the Board of Pharmacy for the purpose of evaluating the applicant's qualifications for licensure.

R156-17b-304. Temporary Licensure.

(1) In accordance with Subsection 58-1-303(1), the Division may issue a temporary pharmacist license to a person who meets all qualifications for licensure as a pharmacist except for the passing of the required examination, if the applicant:

(a) is a graduate of an ACPE accredited pharmacy school within two months immediately preceding application for licensure or enrolled in a pharmacy graduate residency or fellowship program;

(b) submit a complete application for licensure as a pharmacist except the passing of the NAPLEX and MJPE examinations;

(c) submits evidence of having secured employment conditioned upon issuance of the temporary license, and the employment is under the direct, on-site supervision of a pharmacist with an active, non-temporary license that may or may not include a controlled substance license; and

(d) has registered to take the required licensure examinations.

(2) A temporary pharmacist license issued under Subsection (1) expires the earlier of:

(a) six months from the date of issuance;

(b) the date upon which the Division receives notice from the examination agency that the individual has failed either examination twice; or

(c) the date upon which the Division issues the individual full licensure.

(3) An individual who has failed either examination twice shall meet with the Board to request an additional authorization to test. The Division, in collaboration with the Board, may require additional training as a condition for approval of an authorization to retest.

(4) A pharmacist temporary license issued in accordance with this section cannot be renewed or extended.

R156-17b-305. Licensure - Pharmacist by Endorsement.

(1) In accordance with Subsections 58-17b-303(3) and 58-1-301(3), an applicant for licensure as a pharmacist by endorsement shall apply through the "Licensure Transfer Program" administered by NABP.

(2) An applicant for licensure as a pharmacist by endorsement does not need to provide evidence of intern hours if that applicant has:

(a) lawfully practiced as a licensed pharmacist a minimum of 2,000 hours in the four years immediately preceding application in Utah;

(b) obtained sufficient continuing education credits required to maintain a license to practice pharmacy in the state of practice; and

(c) not had a pharmacist license suspended, revoked, canceled, surrendered, or otherwise restricted for any reason in any state for ten years prior to application in Utah, unless otherwise approved by the Division in collaboration with the Board.

R156-17b-307. Qualifications for Licensure - Criminal Background Checks.

(1) An applicant for licensure as a pharmacy shall document to the satisfaction of the Division the owners and management of the pharmacy and the facility in which the pharmacy is located.

(2) The following individuals associated with an applicant for licensure as a pharmacy shall be subject to the criminal background check requirements set forth in Section 58-17b-307:

(a) the PIC;

(b) the PIC's immediate supervisor;

(c) the senior person in charge of the facility in which the pharmacy is located;

(d) others associated with management of the pharmacy or the facility in which the pharmacy is located as determined

necessary by the Division in order to protect public health, safety and welfare; and

(e) owners of the pharmacy or the facility in which the pharmacy is located as determined necessary by the Division in order to protect public health, safety and welfare.

R156-17b-308. Renewal Cycle - Procedures.

(1) In accordance with Subsection 58-1-308(1), the renewal date for the two-year renewal cycle applicable to licensees under Title 58, Chapter 17b is established by rule in Section R156-1-308a.

(2) Renewal procedures shall be in accordance with Section R156-1-308c.

(3) An intern license may be extended upon the request of the licensee and approval by the Division under the following conditions:

(a) the intern applied to the Division for a pharmacist license and to sit for the NAPLEX and MJPE examinations within three calendar months after obtaining full certification from the Foreign Pharmacy Graduate Equivalency Commission; or

(b) the intern lacks the required number of internship hours for licensure.

R156-17b-309. Continuing Education.

(1) In accordance with Section 58-17b-310 and Subsections 58-1-203(1)(g) and 58-1-308(3)(b), there is created a requirement for continuing education as a condition for renewal or reinstatement of a pharmacist or pharmacy technician license issued under Title 58, Chapter 17b.

(2) Requirements shall consist of the following number of qualified continuing education hours in each preceding renewal period:

- (a) 30 hours for a pharmacist; and
- (b) 20 hours for a pharmacy technician.

(3) The required number of hours of qualified continuing professional education for an individual who first becomes licensed during the two year renewal cycle shall be decreased in a pro-rata amount equal to any part of that two year period preceding the date on which that individual first became licensed.

(4) Qualified continuing professional education hours shall consist of the following:

(a) for pharmacists:

(i) institutes, seminars, lectures, conferences, workshops, various forms of mediated instruction, and programmed learning courses, presented by an institution, individual, organization, association, corporation or agency that has been approved by ACPE;

(ii) programs approved by health-related continuing education approval organizations provided the continuing education is nationally recognized by a healthcare accrediting agency and the education is related to the practice of pharmacy;

(iii) programs of certification by qualified individuals, such as certified diabetes educator credentials, board certification in advanced therapeutic disease management or other certification as approved by the Division in consultation with the Board; and

(iv) training or educational presentations offered by the Division.

(b) for pharmacy technicians:

(i) institutes, seminars, lectures, conferences, workshops, various forms of mediated instruction, and programmed learning courses, presented by an institution, individual, organization, association, corporation or agency that has been approved by ACPE;

(ii) programs approved by health-related continuing education approval organizations provided the continuing education is nationally recognized by a healthcare accrediting

agency and the education is related to the practice of pharmacy; and

(iii) educational meetings that meet ACPE continuing education criteria sponsored by the Utah Pharmacist Association, the Utah Society of Health-System Pharmacists or other professional organization or association; and

(iv) training or educational presentations offered by the Division.

(5) Credit for qualified continuing professional education shall be recognized in accordance with the following:

(a) Pharmacists:

(i) a minimum of 12 hours shall be obtained through attendance at live or technology enabled participation lectures, seminars or workshops;

(ii) a minimum of 15 hours shall be in drug therapy or patient management; and

(iii) a minimum of one hour shall be in pharmacy law or ethics.

(b) Pharmacy Technicians:

(i) a minimum of eight hours shall be obtained through attendance at live or technology enabled participation at lectures, seminars or workshops; and

(ii) a minimum of one hour shall be in pharmacy law or ethics.

(iii) documentation of current PTCEB or ExCPT certification will count as meeting the requirement for continuing education.

(6) A licensee shall be responsible for maintaining competent records of completed qualified continuing professional education for a period of four years after the close of the two year period to which the records pertain. It is the responsibility of the licensee to maintain such information with respect to qualified continuing professional education to demonstrate it meets the requirements under this section.

R156-17b-401. Disciplinary Proceedings.

(1) An individual licensed as a pharmacy intern who is currently under disciplinary action and qualifies for licensure as a pharmacist may be issued a pharmacist license under the same restrictions as the pharmacy intern license.

(2) A pharmacist, pharmacy intern, pharmacy technician, pharmacy technician trainee, or DMP whose license or registration is suspended under Subsection 58-17b-701(6) may petition the Division at any time to demonstrate the ability to resume competent practice.

R156-17b-402. Administrative Penalties.

In accordance with Subsection 58-17b-401(6) and Sections 58-17b-501 and 58-17b-502, unless otherwise ordered by the presiding officer, the following fine and citation schedule shall apply:

(1) preventing or refusing to permit any authorized agent of the Division to conduct an inspection, in violation of Subsection 58-17b-501(1):

initial offense: \$500 - \$2,000

subsequent offense(s): \$5,000

(2) failing to deliver the license or permit or certificate to the Division upon demand, in violation Subsection 58-17b-501(2):

initial offense: \$100 - \$1,000

subsequent offense(s): \$500 - \$2,000

(3) using the title pharmacist, druggist, pharmacy intern, pharmacy technician, pharmacy technician trainee or any other term having a similar meaning or any term having similar meaning when not licensed to do so, in violation of Subsection 58-17b-501(3)(a):

initial offense: \$500 - \$2,000

subsequent offense(s): \$2,000 - \$10,000

(4) conducting or transacting business under a name that

contains as part of that name the words drugstore, pharmacy, drugs, medicine store, medicines, drug shop, apothecary, prescriptions or any other term having a similar meaning or in any manner advertising otherwise describing or referring to the place of the conducted business or profession when not licensed to do so, in violation of Subsection 58-17b-501(3)(b):

initial offense: \$500 - \$2,000

subsequent offense(s): \$2,000 - \$10,000

(5) buying, selling, causing to be sold, or offering for sale any drug or device that bears the inscription sample, not for resale, investigational purposes, or experimental use only or other similar words inspection, in violation of Subsection 58-17b-501(4):

initial offense: \$1,000 - \$5,000

subsequent offense(s): \$10,000

(6) using to the licensee's own advantage or revealing to anyone other than the Division, Board or its authorized representatives, any information acquired under the authority of this chapter concerning any method or process that is a trade secret, in violation of Subsection 58-17b-501(5):

initial offense: \$100 - \$500

subsequent offense(s): \$200 - \$1,000

(7) illegally procuring or attempting to procure any drug for the licensee or to have someone else procure or attempt to procure a drug, in violation of Subsection 58-17b-501(6):

initial offense: \$500 - \$2,000

subsequent offense(s): \$2,000 - \$10,000

(8) filling, refilling or advertising the filling or refilling of prescription drugs when not licensed do to so, in violation of Subsection 58-17b-501(7):

initial offense: \$500 - \$2,000

subsequent offense(s): \$2,000 - \$10,000

(9) requiring any employed pharmacist, pharmacy intern, pharmacy technician, pharmacy technician trainee or authorized supportive personnel to engage in any conduct in violation of this chapter, in violation of Subsection 58-17b-501(8):

initial offense: \$500 - \$2,000

subsequent offense(s): \$2,500 - \$10,000

(10) being in possession of a drug for an unlawful purpose, in violation of Subsection 58-17b-501(9):

initial offense: \$500 - \$1,000

subsequent offense(s): \$1,500 - \$5,000

(11) dispensing a prescription drug to anyone who does not have a prescription from a practitioner or to anyone who is known or should be known as attempting to obtain drugs by fraud or misrepresentation, in violation of Subsection 58-17b-501(10):

initial offense: \$500 - \$2,000

subsequent offense(s): \$2,500 - \$10,000

(12) selling, dispensing or otherwise trafficking in prescription drugs when not licensed to do so or when not exempted from licensure, in violation of Subsection 58-17b-501(11):

initial offense: \$1,000 - \$5,000

subsequent offense(s): \$10,000

(13) using a prescription drug or controlled substance for the licensee that was not lawfully prescribed for the licensee by a practitioner, in violation of Subsection 58-17b-501(12):

initial offense: \$100 - \$500

subsequent offense(s): \$1,000 - \$2,500

(14) willfully deceiving or attempting to deceive the Division, the Board or its authorized agents as to any relevant matter regarding compliance under this chapter, in violation of Subsection 58-17b-502(1):

initial offense: \$500 - \$2,000

subsequent offense(s): \$2,500 - \$10,000

(15) paying rebates to practitioners or any other health care provider, or entering into any agreement with a medical practitioner or any other person for the payment or acceptance

of compensation for recommending the professional services of either party, in violation of Subsection 58-17b-502(2):

initial offense: \$2,500 - \$5,000

subsequent offense(s): \$5,500 - \$10,000

(16) misbranding or adulteration of any drug or device or the sale, distribution or dispensing of any outdated, misbranded, or adulterated drugs or devices, in violation of Subsection 58-17b-502(3):

initial offense: \$1,000 - \$5,000

subsequent offense(s): \$10,000

(17) engaging in the sale or purchase of drugs that are samples or packages bearing the inscription "sample" or "not for resale" or similar words or phrases, in violation of Subsection 58-17b-502(4):

initial offense: \$500 - \$2,000

subsequent offense(s): \$2,500 - \$10,000

(18) accepting back and redistributing any unused drugs, with the exception as provided in Section 58-17b-503, in violation of Subsection 58-17b-502(5):

initial offense: \$1,000 - \$5,000

subsequent offense(s): \$10,000

(19) engaging in an act in violation of this chapter committed by a person for any form of compensation if the act is incidental to the person's professional activities, including the activities of a pharmacist, pharmacy intern, pharmacy technician, or pharmacy technician trainee in violation of Subsection 58-17b-502(6):

initial offense: \$500 - \$2,000

subsequent offense(s): \$2,500 - \$10,000

(20) violating Federal Title II, PL 91, Controlled Substances Act or Title 58, Chapter 37, Utah Controlled Substances Act, or rules and regulations adopted under either act, in violation of Subsection 58-17b-502(7):

initial offense: \$500 - \$2,000

subsequent offense(s): \$2,500 - \$10,000

(21) requiring or permitting pharmacy interns, pharmacy technicians, or pharmacy technician trainees to engage in activities outside the scope of practice for their respective license classifications, or beyond their scopes of training and ability, in violation of Subsection 58-17b-502(8):

initial offense: \$100 - \$500

subsequent offense(s): \$500 - \$1,000

(22) administering without appropriate training, guidelines, lawful order, or in conflict with a practitioner's written guidelines or protocol for administering, in violation of Subsection 58-17b-502(9):

initial offense: \$500 - \$2,000

subsequent offense(s): \$2,000 - \$10,000

(23) disclosing confidential patient information in violation of the provision of the Health Insurance Portability and Accountability Act of 1996 or other applicable law, in violation of Subsection 58-17b-502(10):

initial offense: \$100 - \$500

subsequent offense(s): \$500 - \$1,000

(24) engaging in the practice of pharmacy without a licensed pharmacist designated as the PIC, in violation of Subsection 58-17b-502(11):

initial offense: \$100 - \$500

subsequent offense(s): \$2,000 - \$10,000

(25) failing to report to the Division any adverse action taken by another licensing jurisdiction, government agency, law enforcement agency or court, in violation of Subsection 58-17b-502(12):

initial offense: \$100 - \$500

subsequent offense(s): \$500 - \$1,000

(26) preparing a prescription drug in a dosage form that is regularly and commonly available from a manufacturer in quantities and strengths prescribed by a practitioner, in violation of Subsection 58-17b-502(13):

- initial offense: \$500 - \$1,000
 subsequent offense(s): \$2,500 - \$5,000
 (27) violating any ethical code provision of the American Pharmaceutical Association Code of Ethics for Pharmacists, October 27, 1994, in violation of Subsection R156-17b-502(1):
 initial offense: \$250 - \$500
 subsequent offense(s): \$2,000 - \$10,000
 (28) failing to comply with USP-NF Chapter 795 guidelines, in violation of Subsection R156-17b-502(2):
 initial offense: \$250 - \$500
 subsequent offense(s): \$500 - \$750
 (29) failing to comply with USP-NF Chapter 797 guidelines, in violation of Subsection R156-17b-502(2):
 initial offense: \$500 - \$2,000
 subsequent offense(s): \$2,500 - \$10,000
 (30) failing to comply with the continuing education requirements set forth in this rule, in violation of Subsection R156-17b-502(3):
 initial offense: \$100 - \$500
 subsequent offense(s): \$500 - \$1,000
 (31) failing to provide the Division with a current mailing address within 10 days following any change of address, in violation of Subsection R156-17b-502(4):
 initial offense: \$50 - \$100
 subsequent offense(s): \$200 - \$300
 (32) defaulting on a student loan, in violation of Subsection R156-17b-502(5):
 initial offense: \$100 - \$200
 subsequent offense(s): \$200 - \$500
 (33) failing to abide by all applicable federal and state law regarding the practice of pharmacy, in violation of Subsection R156-17b-502(6):
 initial offense: \$500 - \$1,000
 subsequent offense(s): \$2,000 - \$10,000
 (34) failing to comply with administrative inspections, in violation of Subsection R156-17b-502(7):
 initial offense: \$500 - \$2,000
 subsequent offense(s): \$2,000 - \$10,000
 (35) failing to return a self-inspection report according to the deadline established by the Division, or providing false information on a self-inspection report, in violation of Subsection R156-17b-502(8):
 initial offense: \$100 - \$250
 subsequent offense(s): \$300 - \$500
 (36) violating the laws and rules regulating operating standards in a pharmacy discovered upon inspection by the Division, in violation of Subsection R156-17b-502(9):
 initial violation: \$50 - \$100
 failure to comply within determined time: \$250 - \$500
 subsequent violations: \$250 - \$500
 failure to comply within established time: \$750 - \$1,000
 (37) abandoning a pharmacy and/or leaving drugs accessible to the public, in violation of Subsection R156-17b-502(10):
 initial offense: \$500 - \$2,000
 subsequent offense(s): \$2,000 - \$10,000
 (38) failing to identify license classification when communicating by any means, in violation of Subsection R156-17b-502(11):
 initial offense: \$100 - \$500
 subsequent offense(s): \$500 - \$1,000
 (39) failing to maintain an appropriate ratio of personnel, in violation of Subsection R156-17b-502(12):
 Pharmacist initial offense: \$100 - \$250
 Pharmacist subsequent offense(s): \$500 - \$2,500
 Pharmacy initial offense: \$250 - \$1,000
 Pharmacy subsequent offense(s): \$500 - \$5,000
 (40) allowing any unauthorized persons in the pharmacy, in violation of Subsection R156-17b-502(13):
 Pharmacist initial offense: \$50 - \$100
 Pharmacist subsequent offense(s): \$250 - \$500
 Pharmacy initial offense: \$250 - \$500
 Pharmacy subsequent offense(s): \$1,000 - \$2,000
 (41) failing to offer to counsel any person receiving a prescription medication, in violation of Subsection R156-17b-502(14):
 Pharmacy personnel initial offense: \$500 - \$2,500
 Pharmacy personnel subsequent offense(s): \$5,000 - \$10,000
 Pharmacy: \$2,000 per occurrence
 (42) failing to pay an administrative fine within the time designated by the Division, in violation of Subsection R156-17b-502(15):
 Double the original penalty amount up to \$10,000
 (43) failing to comply with the PIC or DMPIC standards as established in Section R156-17b-603, in violation of Subsection R156-17b-502(16):
 initial offense: \$500 - \$2,000
 subsequent offense(s) \$2,000 - \$10,000
 (44) failing to take appropriate steps to avoid or resolve identified drug therapy management problems as referenced in Subsection R156-17b-611(3), in violation of Subsection R156-17b-502(17):
 initial offense: \$500 - \$2,500
 subsequent offense: \$5,000 - \$10,000
 (45) dispensing a medication that has been discontinued by the FDA, in violation of Subsection R156-17b-502(18):
 initial offense: \$100 - \$500
 subsequent offense: \$200 - \$1,000
 (46) failing to keep or report accurate records of training hours, in violation of Subsection R156-17b-502(19):
 initial offense: \$100 - \$500
 subsequent offense: \$200 - \$1,000
 (47) failing to provide PIC or DMPIC information to the Division within 30 days of a change in PIC or DMPIC, in violation of Subsection R156-17b-502(20):
 initial offense: \$100 - \$500
 subsequent offense: \$200 - \$1,000
 (48) requiring a pharmacy, PIC, or any other pharmacist to operate a pharmacy with unsafe personnel ratio, in violation of Subsection R156-17b-502(21):
 initial offense: \$500 - \$2,000
 subsequent offense: \$2,000 - \$10,000
 (49) failing to update the Division within seven calendar days of any change in the email address designated for use in self-audits or pharmacy alerts, in violation of Subsection R156-17b-502(22):
 Pharmacist initial offense: \$100 - \$300
 Pharmacist subsequent offense(s): \$500 - \$1,000
 Pharmacy initial offense: \$250 - \$500
 Pharmacy subsequent offense(s): \$500 - \$1,250
 (50) practicing or attempting to practice as a pharmacist, pharmacist intern, pharmacy technician, or pharmacy technician trainee or operating a pharmacy without a license, in violation of Subsection 58-1-501(1)(a):
 initial offense: \$500 - \$2,000
 subsequent offense(s): \$2,000 - \$10,000
 (51) impersonating a licensee or practicing under a false name, in violation of Subsection 58-1-501(1)(b):
 initial offense: \$500 - \$2,000
 subsequent offense(s): \$2,000 - \$10,000
 (52) knowingly employing an unlicensed person, in violation of Subsection 58-1-501(1)(c):
 initial offense: \$500 - \$1,000
 subsequent offense(s): \$1,000 - \$5,000
 (53) knowingly permitting the use of a license by another person, in violation of Subsection 58-1-501(1)(d):
 initial offense: \$500 - \$1,000

- subsequent offense(s): \$1,000 - \$5,000
- (54) obtaining a passing score, applying for or obtaining a license or otherwise dealing with the Division or Board through the use of fraud, forgery, intentional deception, misrepresentation, misstatement, or omission, in violation of Subsection 58-1-501(1)(e):
initial offense: \$100 - \$2,000
subsequent offense(s): \$2,000 - \$10,000
- (55) issuing a prescription without prescriptive authority conferred by a license or an exemption to licensure, in violation of Subsection 58-1-501(1)(f)(i)(A) and 58-1-501(2)(m)(i):
initial offense: \$500 - \$2,000
subsequent offense(s): \$2,000 - \$10,000
- (56) issuing a prescription without prescriptive authority conferred by a license or an exemption to licensure without obtaining information sufficient to establish a diagnosis, identify underlying conditions and contraindications to treatment in a situation other than an emergency or an on-call cross coverage situation, in violation of Subsection 58-1-501(1)(f)(i)(B) and 58-1-501(2)(m)(ii):
initial offense: \$500 - \$2,000
subsequent offense(s): \$2,000 - \$10,000
- (57) violating or aiding or abetting any other person to violate any statute, rule or order regulating pharmacy, in violation of Subsection 58-1-501(2)(a):
initial offense: \$100 - \$2,000
subsequent offense(s): \$2,000 - \$10,000
- (58) violating or aiding or abetting any other person to violate any generally accepted professional or ethical standard, in violation of Subsection 58-1-501(2)(b):
initial offense: \$500 - \$2,000
subsequent offense(s): \$2,000 - \$10,000
- (59) engaging in conduct that results in conviction of, or a plea of nolo contendere, or a plea of guilty or nolo contendere held in abeyance to a crime, in violation of Subsection 58-1-501(2)(c):
initial offense: \$500 - \$2,000
subsequent offense(s): \$2,000 - \$10,000
- (60) engaging in conduct that results in disciplinary action by any other jurisdiction or regulatory authority, that if the conduct had occurred in this state, would constitute grounds for denial of licensure or disciplinary action, in violation of Subsection 58-1-501(2)(d):
initial offense: \$100 - \$500
subsequent offense(s): \$200 - \$1,000
- (61) engaging in conduct, including the use of intoxicants, drugs, or similar chemicals, to the extent that the conduct does or may impair the ability to safely engage in practice as a pharmacist, pharmacy intern, pharmacy technician, or pharmacy technician trainee, in violation of Subsection 58-1-501(2)(e):
initial offense: \$100 - \$500
subsequent offense(s): \$200 - \$1,000
- (62) practicing or attempting to practice as a pharmacist, pharmacy intern, pharmacy technician, or pharmacy technician trainee when physically or mentally unfit to do so, in violation of Subsection 58-1-501(2)(f):
initial offense: \$100 - \$500
subsequent offense(s): \$200 - \$1,000
- (63) practicing or attempting to practice as a pharmacist, pharmacy intern, pharmacy technician, or pharmacy technician trainee through gross incompetence, gross negligence or a pattern of incompetency or negligence, in violation of Subsection 58-1-501(2)(g):
initial offense: \$500 - \$2,000
subsequent offense(s): \$2,000 - \$10,000
- (64) practicing or attempting to practice as a pharmacist, pharmacy intern, pharmacy technician, or pharmacy technician trainee by any form of action or communication that is false, misleading, deceptive or fraudulent, in violation of Subsection 58-1-501(2)(h):
initial offense: \$100 - \$500
subsequent offense(s): \$200 - \$1,000
- (65) practicing or attempting to practice as a pharmacist, pharmacy intern, pharmacy technician, or pharmacy technician trainee beyond the individual's scope of competency, abilities or education, in violation of Subsection 58-1-501(2)(i):
initial offense: \$100 - \$500
subsequent offense(s): \$200 - \$1,000
- (66) practicing or attempting to practice as a pharmacist, pharmacy intern, pharmacy technician, or pharmacy technician trainee beyond the scope of licensure, in violation of Subsection 58-1-501(2)(j):
initial offense: \$100 - \$500
subsequent offense(s): \$200 - \$1,000
- (67) verbally, physically or mentally abusing or exploiting any person through conduct connected with the licensee's practice, in violation of Subsection 58-1-501(2)(k):
initial offense: \$100 - \$1,000
subsequent offense(s): \$500 - \$2,000
- (68) acting as a supervisor without meeting the qualification requirements for that position as defined by statute or rule, in violation of Subsection 58-1-501(2)(l):
initial offense: \$100 - \$500
subsequent offense(s): \$200 - \$1,000
- (69) violating a provision of Section 58-1-501.5, in violation of Subsection 58-1-501(2)(n):
initial offense: \$500 - \$2,000
subsequent offense(s): \$2,000 - \$10,000
- (70) surrendering licensure to any other licensing or regulatory authority having jurisdiction over the licensee or applicant in the same occupation or profession while an investigation or inquiry into allegations of unprofessional or unlawful conduct is in progress or after a charging document has been filed against the applicant or licensee alleging unprofessional or unlawful conduct, in violation of Subsection R156-1-501(1):
initial offense: \$500 - \$2,000
subsequent offense(s): \$2,500 - \$10,000
- (71) practicing a regulated occupation or profession in, through, or with a limited liability company that has omitted the words, "limited company," "limited liability company," or the abbreviation "L.C." or "L.L.C." in the commercial use of the name of the limited liability company, in violation of Subsection R156-1-501(2):
initial offense: \$500 - \$2,000
subsequent offense(s): \$2,500 - \$10,000
- (72) practicing a regulated occupation or profession in, through, or with a limited partnership that has omitted the words, "limited partnership," "limited," or the abbreviation "L.P." or "Ltd." in the commercial use of the name of the limited partnership, in violation of Subsection R156-1-501(3):
initial offense: \$500 - \$2,000
subsequent offense(s): \$2,500 - \$10,000
- (73) practicing a regulated occupation or profession in, through, or with a professional corporation that has omitted the words "professional corporation" or the abbreviation "P.C." in the commercial use of the name of the professional corporation, in violation of Subsection R156-1-501(4):
initial offense: \$500 - \$2,000
subsequent offense(s): \$2,500 - \$10,000
- (74) using a capitalized DBA (doing-business-as name) that has not been properly registered with the Division of Corporations and with the Division of Occupational and Professional Licensing, in violation of Subsection R156-1-501(5):
initial offense: \$500 - \$2,000
subsequent offense(s): \$2,500 - \$10,000
- (75) failing, as a prescribing practitioner, to follow the

"Model Policy for the Use of Controlled Substances for the Treatment of Pain," May 2004, established by the Federation of State Medical Boards of the United States, Inc., which is hereby adopted and incorporated by reference, in violation of R156-1-501(6):

initial offense: \$500 - \$2,000
subsequent offense(s): \$2,500 - \$10,000

(76) engaging in prohibited acts as defined in Section 58-37-8, in violation of Section 58-37-8:

initial offense: \$1,000 - \$5,000
subsequent offense(s) \$5,000 - \$10,000

(77) self-prescribing or self-administering by a licensee of any Schedule II or Schedule III controlled substance that is not prescribed by another practitioner having authority to prescribe the drug, in violation of Subsection R156-37-502(1)(a):

initial offense: \$500 - \$2,000
subsequent offense(s): \$2,500 - \$10,000

(78) prescribing or administering a controlled substance for a condition that the licensee is not licensed or competent to treat, in violation of Subsection R156-37-502(1)(b):

initial offense: \$500 - \$2,000
subsequent offense(s): \$2,500 - \$10,000

(79) violating any federal or state law relating to controlled substances, in violation of Subsection R156-37-502(2):

initial offense: \$500 - \$2,000
subsequent offense(s): \$2,500 - \$10,000

(80) failing to deliver to the Division all controlled substance certificates issued by the Division, to the Division, upon an action that revokes, suspends, or limits the license, in violation of R156-37-502(3):

initial offense: \$500 - \$2,000
subsequent offense(s): \$2,500 - \$10,000

(81) failing to maintain controls over controlled substances that would be considered by a prudent licensee to be effective against diversion, theft, or shortage of controlled substances, in violation of Subsection R156-37-502(4):

initial offense: \$500 - \$2,000
subsequent offense(s): \$2,500 - \$10,000

(82) being unable to account for shortages of controlled substances in any controlled substances inventory for which the licensee has responsibility, in violation of Subsection R156-37-502(5):

initial offense: \$500 - \$2,000
subsequent offense(s): \$2,500 - \$10,000

(83) knowingly prescribing, selling, giving away, or administering, directly or indirectly, or offering to sell, furnish, give away, or administer any controlled substance to a drug dependent person, as defined in Subsection 58-37-2(1)(s), except for legitimate medical purposes as permitted by law, in violation of Subsection R156-37-502(6):

initial offense: \$500 - \$2,000
subsequent offense(s): \$2,500 - \$10,000

(84) refusing to make available for inspection controlled substance stock, inventory, and records as required under this rule or other law regulating controlled substances and controlled substance records, in violation of Subsection R156-37-502(7):

initial offense: \$500 - \$2,000
subsequent offense(s): \$2,500 - \$10,000

(85) failing to submit controlled substance prescription information to the database manager after being notified in writing to do so, in violation of Subsection R156-37-502(8):

initial offense: \$500 - \$2,000
subsequent offense(s): \$2,500 - \$10,000

(86) any other conduct that constitutes unprofessional or unlawful conduct:

initial offense: \$100 - \$500
subsequent offense(s): \$200 - \$1,000

(87) if licensed as a DMP or DMP clinic pharmacy, delegating the dispensing of a drug to a DMP designee who has

not completed a formal or on-the-job dispensing training program that meets standards established in Section R156-17b-622, in violation of Subsection R156-17b-502 (25):

initial offense: \$500 - \$2,000
subsequent offense: \$2,500 - \$10,000

R156-17b-502. Unprofessional Conduct.

"Unprofessional conduct" includes:

(1) violating any provision of the American Pharmaceutical Association (APhA) Code of Ethics for Pharmacists, October 27, 1994, which is hereby incorporated by reference;

(2) failing to comply with the USP-NF Chapters 795 and 797 if such chapters are applicable to activities performed in the pharmacy;

(3) failing to comply with the continuing education requirements set forth in these rules;

(4) failing to provide the Division with a current mailing address within a 10 business day period of time following any change of address;

(5) defaulting on a student loan;

(6) failing to abide by all applicable federal and state law regarding the practice of pharmacy;

(7) failing to comply with administrative inspections;

(8) failing to return according to the deadline established by the Division, or providing false information on a self-inspection report;

(9) violating the laws and rules regulating operating standards in a pharmacy discovered upon inspection by the Division;

(10) abandoning a pharmacy or leaving prescription drugs accessible to the public;

(11) failing to identify licensure classification when communicating by any means;

(12) practicing pharmacy with an inappropriate pharmacist to pharmacy intern ratio established by Subsection R156-17b-606(1)(d) or pharmacist to pharmacy technician ratio as established by Subsection R156-17b-601(3);

(13) allowing any unauthorized persons in the pharmacy;

(14) failing to offer to counsel any person receiving a prescription medication;

(15) failing to pay an administrative fine that has been assessed in the time designated by the Division;

(16) failing to comply with the PIC or DMPIC standards as established in Section R156-17b-603;

(17) failing to adhere to institutional policies and procedures related to technician checking of medications when technician checking is utilized;

(18) failing to take appropriate steps to avoid or resolve identified drug therapy management problems as referenced in Subsection R156-17b-611(3);

(19) dispensing medication that has been discontinued by the FDA;

(20) failing to keep or report accurate records of training hours;

(21) failing to provide PIC or DMPIC information to the Division within 30 days of a change in PIC or DMPIC;

(22) requiring a pharmacy, pharmacist, or DMP to operate the pharmacy or allow operation of the pharmacy with a ratio of supervising pharmacist or DMP to other pharmacy personnel in circumstances that result in, or reasonably would be expected to result in, an unreasonable risk of harm to public health, safety, and welfare;

(23) failing to update the Division within seven calendar days of any change in the email address designated for use in self-audits or pharmacy alerts; and

(24) failing to ensure, as a DMP or DMP clinic pharmacy, that a DMP designee has completed a formal or on-the-job dispensing training program that meets standards established in

Section R156-17b-622.

R156-17b-601. Operating Standards - Pharmacy Technician and Pharmacy Technician Trainee.

In accordance with Subsection 58-17b-102(56), practice as a licensed pharmacy technician is defined as follows:

(1) A pharmacy technician may perform any task associated with the physical preparation and processing of prescription and medication orders including:

- (a) receiving written prescriptions;
- (b) taking refill orders;
- (c) entering and retrieving information into and from a database or patient profile;
- (d) preparing labels;
- (e) retrieving medications from inventory;
- (f) counting and pouring into containers;
- (g) placing medications into patient storage containers;
- (h) affixing labels;
- (i) compounding;
- (j) counseling for over-the-counter drugs and dietary supplements under the direction of the supervising pharmacist as referenced in Subsection 58-17b-102(56);

(k) accepting new prescription drug orders left on voicemail for a pharmacist to review;

(l) performing checks of certain medications prepared for distribution filled or prepared by another technician within a Class B hospital pharmacy, such as medications prepared for distribution to an automated dispensing cabinet, cart fill, crash cart medication tray, or unit dosing from a prepared stock bottle, in accordance with the following operating standards:

(i) technicians authorized by a hospital to check medications shall have at least one year of experience working as a pharmacy technician and at least six months experience at the hospital where the technician is authorized to check medications;

(ii) technicians shall only check steps in the medication distribution process that do not require the professional judgment of a pharmacist and that are supported by sufficient automation or technology to ensure accuracy (e.g. barcode scanning, drug identification automation, checklists, visual aids);

(iii) hospitals that authorize technicians to check medications shall have a training program and ongoing competency assessment that is documented and retrievable for the duration of each technician's employment and at least three years beyond employment, and shall maintain a list of technicians on staff that are allowed to check medications;

(iv) hospitals that authorize technicians to check medications shall have a medication error reporting system in place and shall be able to produce documentation of its use;

(v) a supervising pharmacist shall be immediately available during all times that a pharmacy technician is checking medications;

(vi) hospitals that authorize technicians to check medications shall have comprehensive policies and procedures that guide technician checking that include the following:

(A) process for technician training and ongoing competency assessment and documentation;

(B) process for supervising technicians who check medications;

(C) list of medications, or types of medications that may or may not be checked by a technician;

(D) description of the automation or technology to be utilized by the institution to augment the technician check;

(E) process for maintaining a permanent log of the unique initials or identification codes that identify each technician responsible for checked medications by name; and

(F) description of processes used to track and respond to medication errors; and

(m) additional tasks not requiring the judgment of a pharmacist.

(2) A pharmacy technician trainee may perform any task in Subsection (1) with the exception of performing checks of certain medications prepared for distribution filled or prepared by another technician within a Class B hospital pharmacy as described in Subsection (1)(l).

(3) The pharmacy technician shall not receive new prescriptions or medication orders as described in Subsection 58-17b-102(56)(b)(iv), clarify prescriptions or medication orders nor perform drug utilization reviews. A new prescription, as used in Subsection 58-17b-102(56)(b)(iv), does not include authorization of a refill of a legend drug.

(4) Pharmacy technicians shall have general supervision by a pharmacist in accordance with Subsection R156-17b-603(3)(s).

(5) No more than one pharmacy technician trainee per shift shall practice in a pharmacy. A pharmacy technician trainee shall practice only under the direct supervision of a pharmacist.

R156-17b-602. Operating Standards - Pharmacy Intern.

A pharmacy intern may provide services including the practice of pharmacy under the supervision of an approved preceptor, as defined in Subsection 58-17b-102(50), provided the pharmacy intern met the criteria as established in Subsection R156-17b-306.

R156-17b-603. Operating Standards - Pharmacist-In-Charge or Dispensing-Medical-Practitioner-In-Charge.

(1) The PIC or DMPIC shall have the responsibility to oversee the operation of the pharmacy in conformance with all laws and rules pertinent to the practice of pharmacy and the distribution of drugs, durable medical equipment and medical supplies. The PIC or DMPIC shall be personally in full and actual charge of the pharmacy.

(2) In accordance with Subsections 58-17b-103(1) and 58-17b-601(1), a unique email address shall be established by the PIC, DMPIC, or responsible party for the pharmacy to be used for self-audits or pharmacy alerts initiated by the Division. The PIC, DMPIC, or responsible party shall notify the Division of the pharmacy's email address in the initial application for licensure.

(3) The duties of the PIC or DMPIC shall include:

(a) assuring that a pharmacist, pharmacy intern, DMP, or DMP designee dispenses drugs or devices, including:

(i) packaging, preparation, compounding and labeling; and

(ii) ensuring that drugs are dispensed safely and accurately as prescribed;

(b) assuring that pharmacy personnel deliver drugs to the patient or the patient's agent, including ensuring that drugs are delivered safely and accurately as prescribed;

(c) assuring that a pharmacist, pharmacy intern, or DMP communicates to the patient or the patient's agent, at their request, information concerning any prescription drugs dispensed to the patient by the pharmacist, pharmacy intern, or DMP;

(d) assuring that a reasonable effort is made to obtain, record and maintain patient medication records;

(e) education and training of pharmacy personnel;

(f) establishment of policies for procurement of prescription drugs and devices and other products dispensed from the pharmacy;

(g) disposal and distribution of drugs from the pharmacy;

(h) bulk compounding of drugs;

(i) storage of all materials, including drugs, chemicals and biologicals;

(j) maintenance of records of all transactions of the pharmacy necessary to maintain accurate control over and

accountability for all pharmaceutical materials required by applicable state and federal laws and regulations;

(k) establishment and maintenance of effective controls against theft or diversion of prescription drugs and records for such drugs;

(l) if records are kept on a data processing system, the maintenance of records stored in that system shall be in compliance with pharmacy requirements;

(m) legal operation of the pharmacy including meeting all inspection and other requirements of all state and federal laws, rules and regulations governing the practice of pharmacy;

(n) implementation of an ongoing quality assurance program that monitors performance of the automated pharmacy system, which is evidenced by written policies and procedures developed for pharmaceutical care;

(o) if permitted to use an automated pharmacy system for dispensing purposes:

(i) ensuring that the system is in good working order and accurately dispenses the correct strength, dosage form and quantity of the drug prescribed while maintaining appropriate record keeping and security safeguards; and

(ii) implementation of an ongoing quality assurance program that monitors performance of the automated pharmacy system, which is evidenced by written policies and procedures developed for pharmaceutical care;

(p) assuring that all relevant information is submitted to the Controlled Substance Database in the appropriate format and in a timely manner;

(q) assuring that all pharmacy personnel have the appropriate licensure;

(r) assuring that no pharmacy operates with a ratio of pharmacist or DMP to other pharmacy personnel circumstances that result in, or reasonably would be expected to result in, an unreasonable risk of harm to public health, safety, and welfare;

(s) assuring that the PIC or DMPIC assigned to the pharmacy is recorded with the Division and that the Division is notified of a change in PIC or DMPIC within 30 days of the change; and

(t) assuring, with regard to the unique email address used for self-audits and pharmacy alerts, that:

(i) the pharmacy uses a single email address; and

(ii) the pharmacy notifies the Division, on the form prescribed, of any change in the email address within seven calendar days of the change.

R156-17b-604. Operating Standards - Closing a Pharmacy.

At least 14 days prior to the closing of a pharmacy, the PIC or DMPIC shall comply with the following:

(1) If the pharmacy is registered to possess controlled substances, send a written notification to the appropriate regional office of the Drug Enforcement Administration (DEA) containing the following information:

(a) the name, address and DEA registration number of the pharmacy;

(b) the anticipated date of closing;

(c) the name, address and DEA registration number of the pharmacy acquiring the controlled substances; and

(d) the date the transfer of controlled substances will occur.

(2) If the pharmacy dispenses prescription drug orders, post a closing notice sign in a conspicuous place in the front of the prescription department and at all public entrance doors to the pharmacy. Such closing notice shall contain the following information:

(a) the date of closing; and

(b) the name, address and telephone number of the pharmacy acquiring the prescription drug orders, including refill information and patient medication records of the pharmacy.

(3) On the date of closing, the PIC or DMPIC shall remove

all prescription drugs from the pharmacy by one or a combination of the following methods:

(a) return prescription drugs to manufacturer or supplier for credit or disposal; or

(b) transfer, sell or give away prescription drugs to a person who is legally entitled to possess drugs, such as a hospital or another pharmacy.

(4) If the pharmacy dispenses prescription drug orders:

(a) transfer the prescription drug order files, including refill information and patient medication records, to a licensed pharmacy within a reasonable distance of the closing pharmacy; and

(b) move all signs or notify the landlord or owner of the property that it is unlawful to use the word "pharmacy", or any other word or combination of words of the same or similar meaning, or any graphic representation that would mislead or tend to mislead the public that a pharmacy is located at this address.

(5) Within 10 days of the closing of the pharmacy, the PIC or DMPIC shall forward to the Division a written notice of the closing that includes the following information:

(a) the actual date of closing;

(b) the license issued to the pharmacy;

(c) a statement attesting:

(i) that an inventory as specified in Subsection R156-17b-605(4) has been conducted; and

(ii) the manner in which the legend drugs and controlled substances possessed by the pharmacy were transferred or disposed;

(d) if the pharmacy dispenses prescription drug orders, the name and address of the pharmacy to which the prescription drug orders, including refill information and patient medication records, were transferred.

(6) If the pharmacy is registered to possess controlled substances, a letter shall be sent to the appropriate DEA regional office explaining that the pharmacy has closed. The letter shall include the following items:

(a) DEA registration certificate;

(b) all unused DEA order forms (Form 222) with the word "VOID" written on the face of each order form; and

(c) copy #2 of any DEA order forms (Form 222) used to transfer Schedule II controlled substances from the closed pharmacy.

(7) If the pharmacy is closed suddenly due to fire, destruction, natural disaster, death, property seizure, eviction, bankruptcy or other emergency circumstances and the PIC or DMPIC cannot provide notification 14 days prior to the closing, the PIC or DMPIC shall comply with the provisions of Subsection (1) as far in advance of the closing as allowed by the circumstances.

(8) If the PIC or DMPIC is not available to comply with the requirements of this section, the owner or legal representative shall be responsible for compliance with the provisions of this section.

(9) Notwithstanding the requirements of this section, a DMP clinic pharmacy that closes but employs licensed practitioners who desire to continue providing services other than dispensing may continue to use prescription drugs in their practice as authorized under their respective licensing act.

R156-17b-605. Operating Standards - Inventory Requirements.

(1) All out of date legend drugs and controlled substances shall be removed from the inventory at regular intervals and in correlation to the beyond use date imprinted on the label.

(2) General requirements for inventory of a pharmacy shall include the following:

(a) the PIC or DMPIC shall be responsible for taking all required inventories, but may delegate the performance of the

inventory to another person or persons;

(b) the inventory records shall be maintained for a period of five years and be readily available for inspection;

(c) the inventory records shall be filed separately from all other records;

(d) the inventory records shall be in a written, typewritten, or printed form and include all stocks of controlled substances on hand on the date of the inventory including any that are out of date drugs and drugs in automated pharmacy systems. An inventory taken by use of a verbal recording device shall be promptly transcribed;

(e) the inventory may be taken either as the opening of the business or the close of business on the inventory date;

(f) the person taking the inventory and the PIC or DMPIC shall indicate the time the inventory was taken and shall sign and date the inventory with the date the inventory was taken. The signature of the PIC or DMPIC and the date of the inventory shall be documented within 72 hours or three working days of the completed initial, annual, change of ownership and closing inventory;

(g) the person taking the inventory shall make an exact count or measure all controlled substances listed in Schedule I or II;

(h) the person taking the inventory shall make an estimated count or measure of all Schedule III, IV or V controlled substances, unless the container holds more than 1,000 tablets or capsules in which case an exact count of the contents shall be made;

(i) the inventory of Schedule I and II controlled substances shall be listed separately from the inventory of Schedule III, IV and V controlled substances;

(j) if the pharmacy maintains a perpetual inventory of any of the drugs required to be inventories, the perpetual inventory shall be reconciled on the date of the inventory.

(3) Requirements for taking the initial controlled substances inventory shall include the following:

(a) all pharmacies having any stock of controlled substances shall take an inventory on the opening day of business. Such inventory shall include all controlled substances including any out-of-date drugs and drugs in automated pharmacy systems;

(b) in the event a pharmacy commences business with no controlled substances on hand, the pharmacy shall record this fact as the initial inventory. An inventory reporting no Schedule I and II controlled substances shall be listed separately from an inventory reporting no Schedule III, IV, and V controlled substances;

(c) the initial inventory shall serve as the pharmacy's inventory until the next completed inventory as specified in Subsection (4) of this section; and

(d) when combining two pharmacies, each pharmacy shall:

(i) conduct a separate closing pharmacy inventory of controlled substances on the date of closure; and

(ii) conduct a combined opening inventory of controlled substances for the new pharmacy prior to opening.

(4) Requirement for annual controlled substances inventory shall be within 12 months following the inventory date of each year and may be taken within four days of the specified inventory date and shall include all stocks including out-of-date drugs and drugs in automated pharmacy systems.

(5) Requirements for change of ownership shall include the following:

(a) a pharmacy that changes ownership shall take an inventory of all legend drugs and controlled substances including out-of-date drugs and drugs in automated pharmacy systems on the date of the change of ownership;

(b) such inventory shall constitute, for the purpose of this section, the closing inventory for the seller and the initial inventory for the buyer; and

(c) transfer of Schedule I and II controlled substances shall require the use of official DEA order forms (Form 222).

(6) Requirement for taking inventory when closing a pharmacy includes the PIC, DMPIC, owner, or the legal representative of a pharmacy that ceases to operate as a pharmacy shall forward to the Division, within ten days of cessation of operation, a statement attesting that an inventory has been conducted, the date of closing and a statement attesting the manner by which legend drugs and controlled substances possessed by the pharmacy were transferred or disposed.

(7) All pharmacies shall maintain a perpetual inventory of all Schedule II controlled substances that shall be reconciled according to facility policy.

R156-17b-606. Operating Standards - Approved Preceptor.

In accordance with Subsection 58-17b-601(1), the operating standards for a pharmacist acting as a preceptor include:

(1) meeting the following criteria:

(a) hold a Utah pharmacist license that is active and in good standing;

(b) document engaging in active practice as a licensed pharmacist for not less than one year in any jurisdiction;

(c) not be under any sanction which, when considered by the Division and Board, would be of such a nature that the best interests of the intern and the public would not be served;

(d) provide direct, on-site supervision to:

(i) no more than two pharmacy interns during a working shift except as provided in Subsection (ii);

(ii) up to five pharmacy interns at public-health outreach programs such as informational health fairs, chronic disease state screening and education programs, and immunization clinics, provided:

(A) the totality of the circumstances are safe and appropriate according to generally recognized industry standards of practice; and

(B) the preceptor has obtained written approval from the pharmacy interns' schools of pharmacy for the intern's participation; and

(e) refer to the intern training guidelines as outlined in the Pharmacy Coordinating Council of Utah Internship Competencies, October 12, 2004, as information about a range of best practices for training interns;

(2) maintaining adequate records to document the number of internship hours completed by the intern and evaluating the quality of the intern's performance during the internship;

(3) completing the preceptor section of a Utah Pharmacy Intern Experience Affidavit found in the application packet at the conclusion of the preceptor/intern relationship regardless of the time or circumstances under which that relationship is concluded; and

(4) being responsible for the intern's actions related to the practice of pharmacy while practicing as a pharmacy intern under supervision.

R156-17b-607. Operating Standards - Supportive Personnel.

(1) In accordance with Subsection 58-17b-102(69)(a), supportive personnel may assist in any tasks not related to drug preparation or processing including:

(a) stock ordering and restocking;

(b) cashiering;

(c) billing;

(d) filing;

(e) receiving a written prescription and delivering it to the pharmacist, pharmacy intern, pharmacy technician, pharmacy technician trainee, DMP, or DMP designee;

(f) housekeeping; and

(g) delivering a pre-filled prescription to a patient.

(2) Supportive personnel shall not enter information into

a patient prescription profile or accept verbal refill information.

(3) In accordance with Subsection 58-17b-102(69)(b) all supportive personnel shall be under the supervision of a licensed pharmacist or DMP. The licensed pharmacist or DMP shall be present in the area where the person being supervised is performing services and shall be immediately available to assist the person being supervised in the services being performed except for the delivery of prefilled prescriptions as provided in Subsection (1)(g) above.

(4) In accordance with Subsection 58-17b-601(1), a pharmacist, pharmacy intern, pharmacy technician, pharmacy technician trainee, DMP, or DMP designee whose license has been revoked or is suspended shall not be allowed to provide any support services in a pharmacy.

R156-17b-608. Common Carrier Delivery.

A pharmacy that employs the United States Postal Service or other common carrier to deliver a filled prescription directly to a patient shall, under the direction of the PIC, DMPIC, or other responsible employee:

(1) use adequate storage or shipping containers and shipping processes to ensure drug stability and potency. The shipping processes shall include the use of appropriate packaging material and devices, according to the recommendations of the manufacturer or the United States Pharmacopeia Chapter 1079, in order to ensure that the drug is kept at appropriate storage temperatures throughout the delivery process to maintain the integrity of the medication;

(2) use shipping containers that are sealed in a manner to detect evidence of opening or tampering;

(3) develop and implement policies and procedures to ensure accountability, safe delivery, and compliance with temperature requirements. The policies and procedures shall address when drugs do not arrive at their destination in a timely manner or when there is evidence that the integrity of a drug was compromised during shipment. In these instances, the pharmacy shall make provisions for the replacement of the drugs;

(4)(i) provide for an electronic, telephonic, or written communication mechanism for a pharmacy to offer counseling to the patient as defined in Section 58-17b-613; and

(ii) provide documentation of such counseling; and

(5) provide information to the patient indicating what the patient should do if the integrity of the packaging or drug was compromised during shipment.

R156-17b-609. Operating Standards - Medication Profile System.

In accordance with Subsections 58-17b-601(1) and 58-17b-604(1), the following operating standards shall apply with respect to medication profile systems:

(1) Patient profiles, once established, shall be maintained by a pharmacy dispensing to patients on a recurring basis for a minimum of one year from the date of the most recent prescription filled or refilled; except that a hospital pharmacy may delete the patient profile for an inpatient upon discharge if a record of prescriptions is maintained as a part of the hospital record.

(2) Information to be included in the profile shall be determined by a responsible pharmacist or DMP at the pharmaceutical facility but shall include as a minimum:

(a) full name of the patient, address, telephone number, date of birth or age and gender;

(b) patient history where significant, including known allergies and drug reactions, and a list of prescription drugs obtained by the patient at the pharmacy including:

(i) name of prescription drug;

(ii) strength of prescription drug;

(iii) quantity dispensed;

(iv) date of filling or refilling;

(v) charge for the prescription drug as dispensed to the patient; and

(c) any additional comments relevant to the patient's drug use.

(3) Patient medication profile information shall be recorded by a pharmacist, pharmacy intern, pharmacy technician, pharmacy technician trainee, or DMP designee.

R156-17b-610. Operating Standards - Patient Counseling.

In accordance with Subsection 58-17b-601(1), guidelines for providing patient counseling established in Section 58-17b-613 include the following:

(1) Counseling shall be offered orally in person unless the patient or patient's agent is not at the pharmacy or a specific communication barrier prohibits oral communication.

(2) A pharmacy facility shall orally offer to counsel but shall not be required to counsel a patient or patient's agent when the patient or patient's agent refuses such counseling.

(3) Based upon the professional judgment of the pharmacist, pharmacy intern, or DMP, patient counseling may include the following elements:

(a) the name and description of the prescription drug;

(b) the dosage form, dose, route of administration and duration of drug therapy;

(c) intended use of the drug, when known, and expected action;

(d) special directions and precautions for preparation, administration and use by the patient;

(e) common severe side or adverse effects or interactions and therapeutic contraindications that may be encountered, including their avoidance, and the action required if they occur;

(f) techniques for self-monitoring drug therapy;

(g) proper storage;

(h) prescription refill information;

(i) action to be taken in the event of a missed dose;

(j) pharmacist comments relevant to the individual's drug therapy, including any other information specific to the patient or drug; and

(k) the date after which the prescription should not be taken or used, or the beyond use date.

(4) The offer to counsel shall be documented and said documentation shall be available to the Division. These records shall be maintained for a period of five years and be available for inspection within 7-10 business days.

(5) Only a pharmacist, pharmacy intern, or DMP may orally provide counseling to a patient or patient's agent and answer questions concerning prescription drugs.

(6) If a prescription drug order is delivered to the patient or the patient's agent at the patient's or other designated location, the following is applicable:

(a) the information specified in Subsection (3) of this section shall be delivered with the dispensed prescription in writing;

(b) if prescriptions are routinely delivered outside the area covered by the pharmacy's local telephone service, the pharmacist shall place on the prescription container or on a separate sheet delivered with the prescription container, the telephone number of the pharmacy and the statement "Written information about this prescription has been provided for you. Please read this information before you take this medication. If you have questions concerning this prescription, a pharmacist is available during normal business hours to answer these questions."; and

(c) written information provided in Subsection (6)(b) of this section shall be in the form of patient information leaflets similar to USP-NF patient information monographs or equivalent information.

(7) Patient counseling shall not be required for inpatients of a hospital or institution where other licensed health care

professionals are authorized to administer the patient's drugs.

R156-17b-610.5. Dispensing in Emergency Department - Patient's Immediate Need.

In accordance with Section 58-17b-610.5, the guidelines for medical practitioners to dispense drugs to a patient in a hospital emergency department are established in this section.

(1) To meet a patient's immediate needs, the prescribing practitioner may provide up to a three-day emergency supply, which is properly labeled according to Subsection R156-17b-610.5(3).

(2) Notwithstanding Subsection R156-17b-610.5(1), the following may be provided:

(a) a seven day supply of sexually-transmitted infections (STI) prophylaxis;

(b) a Naloxone kit.

(3) Labeling of an emergency supply shall at a minimum include:

(a) prescribing practitioner's name, facility name and telephone number;

(b) patient's name;

(c) name of medication and strength;

(d) date given;

(e) instructions for use; and

(f) beyond use date.

(4) Records of controlled substances dispensed by the prescribing practitioner shall be provided to the appropriate pharmacy so that the applicable prescription data can be reported to the Utah Controlled Substance Database.

R156-17b-611. Operating Standards - Drug Therapy Management.

(1) In accordance with Subsections 58-17b-102(17) and 58-17b-601(1), decisions involving drug therapy management shall be made in the best interest of the patient. Drug therapy management may include:

(a) implementing, modifying and managing drug therapy according to the terms of the Collaborative Pharmacy Practice Agreement;

(b) collecting and reviewing patient histories;

(c) obtaining and checking vital signs, including pulse, temperature, blood pressure and respiration;

(d) ordering and evaluating the results of laboratory tests directly applicable to the drug therapy, when performed in accordance with approved protocols applicable to the practice setting; and

(e) such other patient care services as may be allowed by rule.

(2) For the purpose of promoting therapeutic appropriateness, a pharmacist shall at the time of dispensing a prescription, or a prescription drug order, review the patient's medication record. Such review shall at a minimum identify clinically significant conditions, situations or items, such as:

(a) inappropriate drug utilization;

(b) therapeutic duplication;

(c) drug-disease contraindications;

(d) drug-drug interactions;

(e) incorrect drug dosage or duration of drug treatment;

(f) drug-allergy interactions; and

(g) clinical abuse or misuse.

(3) Upon identifying any clinically significant conditions, situations or items listed in Subsection (2) above, the pharmacist shall take appropriate steps to avoid or resolve the problem including consultation with the prescribing practitioner.

R156-17b-612. Operating Standards - Prescriptions.

In accordance with Subsection 58-17b-601(1), the following shall apply to prescriptions:

(1) Prescription orders for controlled substances (including

prescription transfers) shall be handled according to the rules of the Federal Drug Enforcement Administration.

(2) A prescription issued by an authorized licensed practitioner, if verbally communicated by an agent of that practitioner upon that practitioner's specific instruction and authorization, may be accepted by a pharmacist, pharmacy intern, or DMP.

(3) A prescription issued by a licensed prescribing practitioner, if electronically communicated by an agent of that practitioner, upon that practitioner's specific instruction and authorization, may be accepted by a pharmacist, pharmacy intern, pharmacy technician, pharmacy technician trainee, DMP, or DMP designee.

(4) In accordance with Sections 58-17b-609 and 58-17b-611, prescription files, including refill information, shall be maintained for a minimum of five years and shall be immediately retrievable in written or electronic format.

(5) Prescriptions for legend drugs having a remaining authorization for refill may be transferred by the pharmacist, pharmacy intern, or DMP at the pharmacy holding the prescription to a pharmacist, pharmacy intern or DMP at another pharmacy upon the authorization of the patient to whom the prescription was issued or electronically as authorized under Subsection R156-17b-613(9). The transferring pharmacist, pharmacy intern, or DMP and receiving pharmacist, pharmacy intern, or DMP shall act diligently to ensure that the total number of authorized refills is not exceeded. The following additional terms apply to such a transfer:

(a) the transfer shall be communicated directly between pharmacists, pharmacy interns, or DMP or as authorized under Subsection R156-17b-613(9);

(b) both the original and the transferred prescription drug orders shall be maintained for a period of five years from the date of the last refill;

(c) the pharmacist, pharmacy intern, or DMP transferring the prescription drug order shall void the prescription electronically or write void/transfer on the face of the invalidated prescription manually;

(d) the pharmacist, pharmacy intern, or DMP receiving the transferred prescription drug order shall:

(i) indicate on the prescription record that the prescription was transferred electronically or manually; and

(ii) record on the transferred prescription drug order the following information:

(A) original date of issuance and date of dispensing or receipt, if different from date of issuance;

(B) original prescription number and the number of refills authorized on the original prescription drug order;

(C) number of valid refills remaining and the date of last refill, if applicable;

(D) the name and address of the pharmacy and the name of the pharmacist, pharmacy intern, or DMP to whom such prescription is transferred; and

(E) the name of the pharmacist, pharmacy intern, or DMP transferring the prescription drug order information;

(e) the data processing system shall have a mechanism to prohibit the transfer or refilling of legend drugs or controlled substance prescription drug orders that have been previously transferred; and

(f) a pharmacist, pharmacy intern, or DMP may not refuse to transfer original prescription information to another pharmacist, pharmacy intern, or DMP who is acting on behalf of a patient and who is making a request for this information as specified in Subsection (12) of this section.

(6) Prescriptions for terminal patients in licensed hospices, home health agencies or nursing homes may be partially filled if the patient has a medical diagnosis documenting a terminal illness and may not need the full prescription amount.

(7) Refills may be dispensed only in accordance with the

prescriber's authorization as indicated on the original prescription drug order;

(8) If there are no refill instructions on the original prescription drug order, or if all refills authorized on the original prescription drug order have been dispensed, authorization from the prescribing practitioner shall be obtained prior to dispensing any refills.

(9) Refills of prescription drug orders for legend drugs may not be refilled after one year from the date of issuance of the original prescription drug order without obtaining authorization from the prescribing practitioner prior to dispensing any additional quantities of the drug.

(10) Refills of prescription drug orders for controlled substances shall be done in accordance with Subsection 58-37-6(7)(f).

(11) A pharmacist or DMP may exercise professional judgment in refilling a prescription drug order for a drug, other than a controlled substance listed in Schedule II, without the authorization of the prescribing practitioner, provided:

(a) failure to refill the prescription might result in an interruption of a therapeutic regimen or create patient suffering;

(b) either:

(i) a natural or manmade disaster has occurred that prohibits the pharmacist or DMP from being able to contact the practitioner; or

(ii) the pharmacist or DMP is unable to contact the practitioner after a reasonable effort, the effort should be documented and said documentation should be available to the Division;

(c) the quantity of prescription drug dispensed does not exceed a 72-hour supply, unless the packaging is in a greater quantity;

(d) the pharmacist or DMP informs the patient or the patient's agent at the time of dispensing that the refill is being provided without such authorization and that authorization of the practitioner is required for future refills;

(e) the pharmacist or DMP informs the practitioner of the emergency refill at the earliest reasonable time;

(f) the pharmacist or DMP maintains a record of the emergency refill containing the information required to be maintained on a prescription as specified in this subsection; and

(g) the pharmacist or DMP affixes a label to the dispensing container as specified in Section 58-17b-602.

(12) If the prescription was originally filled at another pharmacy, the pharmacist or DMP may exercise his professional judgment in refilling the prescription provided:

(a) the patient has the prescription container label, receipt or other documentation from the other pharmacy that contains the essential information;

(b) after a reasonable effort, the pharmacist or DMP is unable to contact the other pharmacy to transfer the remaining prescription refills or there are no refills remaining on the prescription;

(c) the pharmacist or DMP, in his or her professional judgment, determines that such a request for an emergency refill is appropriate and meets the requirements of (a) and (b) of this subsection; and

(d) the pharmacist or DMP complies with the requirements of Subsections (11)(c) through (g) of this section.

(13) The address specified in Subsection 58-17b-602(1)(b) shall be a physical address, not a post office box.

(14) In accordance with Subsection 58-37-6(7)(e), a prescription may not be written, issued, filled, or dispensed for a Schedule I controlled substance unless:

(a) the person who writes the prescription is licensed to prescribe Schedule I controlled substances; and

(b) the prescribed controlled substance is to be used in research.

R156-17b-613. Operating Standards - Issuing Prescription Orders by Electronic Means.

In accordance with Subsections 58-17b-102(29) through (30), 58-17b-602(1), R156-82, and R156-1, prescription orders may be issued by electronic means of communication according to the following standards:

(1) Prescription orders for Schedule II - V controlled substances received by electronic means of communication shall be handled according to Part 1304.04 of Section 21 of the CFR.

(2) Prescription orders for non-controlled substances received by electronic means of communication may be dispensed by a pharmacist, pharmacy intern, or DMP only if all of the following conditions are satisfied:

(a) all electronically transmitted prescription orders shall include the following:

(i) all information that is required to be contained in a prescription order pursuant to Section 58-17b-602;

(ii) the time and date of the transmission, and if a facsimile transmission, the electronically encoded date, time and fax number of the sender; and

(iii) the name of the pharmacy intended to receive the transmission;

(b) the prescription order shall be transmitted under the direct supervision of the prescribing practitioner or his designated agent;

(c) the pharmacist or DMP shall exercise professional judgment regarding the accuracy and authenticity of the transmitted prescription. Practitioners or their agents transmitting medication orders using electronic equipment are to provide voice verification when requested by the pharmacist receiving the medication order. The pharmacist or DMP is responsible for assuring that each electronically transferred prescription order is valid and shall authenticate a prescription order issued by a prescribing practitioner that has been transmitted to the dispensing pharmacy before filling it, whenever there is a question;

(d) a practitioner may authorize an agent to electronically transmit a prescription provided that the identifying information of the transmitting agent is included on the transmission. The practitioner's electronic signature, or other secure method of validation, shall be provided with the electronic prescription; and

(e) an electronically transmitted prescription order that meets the requirements above shall be deemed to be the original prescription.

(3) This section does not apply to the use of electronic equipment to transmit prescription orders within inpatient medical facilities.

(4) No agreement between a prescribing practitioner and a pharmacy shall require that prescription orders be transmitted by electronic means from the prescribing practitioner to that pharmacy only.

(5) The pharmacist or DMP shall retain a printed copy of an electronic prescription, or a record of an electronic prescription that is readily retrievable and printable, for a minimum of five years. The printed copy shall be of non-fading legibility.

(6) Wholesalers, distributors, manufacturers, pharmacists and pharmacies shall not supply electronic equipment to any prescriber for transmitting prescription orders.

(7) An electronically transmitted prescription order shall be transmitted to the pharmacy of the patient's choice.

(8) Prescription orders electronically transmitted to the pharmacy by the patient shall not be filled or dispensed.

(9) A prescription order for a legend drug or controlled substance in Schedule III through V may be transferred up to the maximum refills permitted by law or by the prescriber by electronic transmission providing the pharmacies share a real-time, on-line database provided that:

(a) the information required to be on the transferred prescription has the same information as described in Subsection R156-17b-612(5)(a) through (f); and

(b) pharmacists, pharmacy interns, pharmacy technicians, or pharmacy technician trainees, DMPs, and DMP designees electronically accessing the same prescription drug order records may electronically transfer prescription information if the data processing system has a mechanism to send a message to the transferring pharmacy containing the following information:

- (i) the fact that the prescription drug order was transferred;
- (ii) the unique identification number of the prescription drug order transferred;
- (iii) the name of the pharmacy to which it was transferred; and
- (iv) the date and time of the transfer.

R156-17b-614a. Operating Standards - General Operating Standards, Class A and B Pharmacy.

(1) In accordance with Subsection 58-17b-601(1), the following operating standards apply to all Class A and Class B pharmacies, which may be supplemented by additional standards defined in this rule applicable to specific types of Class A and B pharmacies. The general operating standards include:

(a) shall be well lighted, well ventilated, clean and sanitary;

(b) if transferring a drug from a manufacturer's or distributor's original container to another container, the dispensing area, if any, shall have a sink with hot and cold culinary water separate and apart from any restroom facilities. This does not apply to clean rooms where sterile products are prepared. Clean rooms should not have sinks or floor drains that expose the area to an open sewer. All required equipment shall be clean and in good operating condition;

(c) be equipped to permit the orderly storage of prescription drugs and durable medical equipment in a manner to permit clear identification, separation and easy retrieval of products and an environment necessary to maintain the integrity of the product inventory;

(d) be equipped to permit practice within the standards and ethics of the profession as dictated by the usual and ordinary scope of practice to be conducted within that facility;

(e) be stocked with the quality and quantity of product necessary for the facility to meet its scope of practice in a manner consistent with the public health, safety and welfare; and

(f) if dispensing controlled substances, be equipped with a security system to:

- (i) permit detection of entry at all times when the facility is closed; and
- (ii) provide notice of unauthorized entry to an individual; and

(g) be equipped with a lock on any entrances to the facility where drugs are stored.

(2) The temperature of the pharmacy shall be maintained within a range compatible with the proper storage of drugs. If a refrigerator or freezer is necessary to properly store drugs at the pharmacy, the pharmacy shall keep a daily written or electronic log of the temperature of the refrigerator or freezer on days of operation. The pharmacy shall retain each log entry for at least three years.

(3) Facilities engaged in simple, moderate or complex non-sterile or any level of sterile compounding activities shall be required to maintain proper records and procedure manuals and establish quality control measures to ensure stability, equivalency where applicable and sterility. The following requirements shall be met:

(a) Facilities shall follow USP-NF Chapter 795, compounding of non-sterile preparations, and USP-NF Chapter 797 if compounding sterile preparations.

(b) Facilities may compound in anticipation of receiving

prescriptions in limited amounts.

(c) Bulk active ingredients shall:

(i) be procured from a facility registered with the federal Food and Drug Administration; and

(ii) not be listed on the federal Food and Drug Administration list of drug products withdrawn or removed from the market for reasons of safety or effectiveness.

(d) All facilities that dispense prescriptions must comply with the record keeping requirements of their State Boards of Pharmacy. When a facility compounds a preparation according to the manufacturer's labeling instructions, then further documentation is not required. All other compounded preparations require further documentation as described in this section.

(e) A master formulation record shall be approved by a pharmacist or DMP for each batch of sterile or non-sterile pharmaceuticals to be prepared. Once approved, a duplicate of the master formulation record shall be used as the compounding record from which each batch is prepared and on which all documentation for that batch occurs. The master formulation record may be stored electronically and shall contain at a minimum:

- (i) official or assigned name;
- (ii) strength;
- (iii) dosage form of the preparation;
- (iv) calculations needed to determine and verify quantities of components and doses of active pharmaceutical ingredients;
- (v) description of all ingredients and their quantities;
- (vi) compatibility and stability information, including references when available;
- (vii) equipment needed to prepare the preparation;
- (viii) mixing instructions, which shall include:
 - (A) order of mixing;
 - (B) mixing temperatures or other environmental controls;
 - (C) duration of mixing; and
 - (D) other factors pertinent to the replication of the preparation as compounded;
- (ix) sample labeling information, which shall contain, in addition to legally required information:
 - (A) generic name and quantity or concentration of each active ingredient;
 - (B) assigned beyond use date;
 - (C) storage conditions; and
 - (D) prescription or control number, whichever is applicable;

- (x) container used in dispensing;
- (xi) packaging and storage requirements;
- (xii) description of final preparation; and
- (xiii) quality control procedures and expected results.

(f) A compounding record for each batch of sterile or non-sterile pharmaceuticals shall document the following:

- (i) official or assigned name;
- (ii) strength and dosage of the preparation;
- (iii) Master Formulation Record reference for the preparation;
- (iv) names and quantities of all components;
- (v) sources, lot numbers, and expiration dates of components;
- (vi) total quantity compounded;
- (vii) name of the person who prepared the preparation;
- (viii) ;
- (ix) name of the person who performed the quality control procedures;

- (x) date of preparation;
- (xi) assigned control, if for anticipation of use or prescription number, if patient specific, whichever is applicable;
- (xii) duplicate label as described in the Master Formulation Record means the sample labeling information that is dispensed on the final product given to the patient and shall

at minimum contain:

- (A) active ingredients;
 - (B) beyond-use-date;
 - (C) storage conditions; and
 - (D) lot number;
- (xiv) proof of the duplicate labeling information, which proof shall:

- (A) be kept at the pharmacy;
- (B) be immediately retrievable;
- (C) include an audit trail for any altered form; and
- (D) be reproduced in:
 - (I) the original format that was dispensed;
 - (II) an electronic format; or
 - (III) a scanned electronic version;
- (xvii) description of final preparation;
- (xviii) results of quality control procedures (e.g. weight range of filled capsules, pH of aqueous liquids); and
- (xix) documentation of any quality control issues and any adverse reactions or preparation problems reported by the patient or caregiver.

(g) The label of each batch prepared of sterile or non-sterile pharmaceuticals shall bear at a minimum:

- (i) the unique lot number assigned to the batch;
- (ii) all active solution and ingredient names, amounts, strengths and concentrations, when applicable;
- (iii) quantity;
- (iv) beyond use date and time, when applicable;
- (v) appropriate ancillary instructions, such as storage instructions or cautionary statements, including cytotoxic warning labels where appropriate; and
- (vi) device-specific instructions, where appropriate.

(h) All prescription labels for compounded sterile and non-sterile medications when dispensed to the ultimate user or agent shall bear at a minimum in addition to what is required in Section 58-17b-602 the following:

(i) generic name and quantity or concentration of each active ingredient. In the instance of a sterile preparation for parenteral use, labeling shall include the name and base solution for infusion preparation;

(ii) assigned compounding record or lot number; and

(iii) "this is a compounded preparation" or similar language.

(i) The beyond use date assigned shall be based on currently available drug stability information and sterility considerations or appropriate in-house or contract service stability testing;

(i) sources of drug stability information shall include the following:

(A) references can be found in Trissel's "Handbook on Injectable Drugs", 17th Edition, October 31, 2012;

(B) manufacturer recommendations; and

(C) reliable, published research;

(ii) when interpreting published drug stability information, the pharmacist or DMP shall consider all aspects of the final sterile product being prepared such as drug reservoir, drug concentration and storage conditions; and

(iii) methods for establishing beyond use dates shall be documented; and

(j) There shall be a documented, ongoing quality control program that monitors and evaluates personnel performance, equipment and facilities that follows the USP-NF Chapters 795 and 797 standards.

(4) The facility shall have current and retrievable editions of the following reference publications in print or electronic format and readily available and retrievable to facility personnel:

(a) Title 58, Chapter 1, Division of Occupational and Professional Licensing Act;

(b) R156-1, General Rule of the Division of Occupational and Professional Licensing;

(c) Title 58, Chapter 17b, Pharmacy Practice Act;

(d) R156-17b, Utah Pharmacy Practice Act Rule;

(e) Title 58, Chapter 37, Utah Controlled Substances Act;

(f) R156-37, Utah Controlled Substances Act Rule;

(g) Title 58, Chapter 37f, Controlled Substance Database

Act;

(h) R156-37f, Controlled Substance Database Act Rule;

(i) Code of Federal Regulations (CFR) 21, Food and Drugs, Part 1300 to end or equivalent such as the USP DI Drug Reference Guides;

(j) current FDA Approved Drug Products (orange book); and

(k) any other general drug references necessary to permit practice dictated by the usual and ordinary scope of practice to be conducted within that facility.

(5) The facility shall maintain a current list of licensed employees involved in the practice of pharmacy at the facility. The list shall include individual licensee names, license classifications, license numbers, and license expiration dates. The list shall be readily retrievable for inspection by the Division and may be maintained in paper or electronic form.

(6) Facilities shall have a counseling area to allow for confidential patient counseling, where applicable.

(7) A pharmacy shall not dispense a prescription drug or device to a patient unless a pharmacist or DMP is physically present and immediately available in the facility.

(8) Only a licensed Utah pharmacist, DMP or authorized pharmacy personnel shall have access to the pharmacy when the pharmacy is closed.

(9) The facility or parent company shall maintain a record for not less than 5 years of the initials or identification codes that identify each dispensing pharmacist or DMP by name. The initials or identification code shall be unique to ensure that each pharmacist or DMP can be identified; therefore identical initials or identification codes shall not be used.

(10) The pharmacy facility shall maintain copy 3 of DEA order form (Form 222) that has been properly dated, initialed and filed and all copies of each unaccepted or defective order form and any attached statements or other documents.

(11) If applicable, a hard copy of the power of attorney authorizing a pharmacist, DMP, or DMP designee to sign DEA order forms (Form 222) shall be available to the Division whenever necessary.

(12) A pharmacist, DMP or other responsible individual shall verify that controlled substances are listed on the suppliers' invoices and were actually received by clearly recording their initials and the actual date of receipt of the controlled substances.

(13) The pharmacy facility shall maintain a record of suppliers' credit memos for controlled substances.

(14) A copy of inventories required under Section R156-17b-605 shall be made available to the Division when requested.

(15) The pharmacy facility shall maintain hard copy reports of surrender or destruction of controlled substances and legend drugs submitted to appropriate state or federal agencies.

(16) If the pharmacy does not store drugs in a locked cabinet and has a drop/false ceiling, the pharmacy's perimeter walls shall extend to the hard deck, or other measures shall be taken to prevent unauthorized entry into the pharmacy.

R156-17b-614b. Operating Standards - Class B pharmacy designated as a Branch Pharmacy.

In accordance with Subsections 58-17b-102(8) and 58-1-301(3), the qualifications for designation as a branch pharmacy include the following:

(1) The Division, in collaboration with the Board, shall approve the location of each branch pharmacy. The following shall be considered in granting such designation:

(a) the distance between or from nearby alternative pharmacies and all other factors affecting access of persons in the area to alternative pharmacy resources;

(b) the availability at the location of qualified persons to staff the pharmacy, including the physician, physician assistant or advanced practice registered nurse;

(c) the availability and willingness of a parent pharmacy and supervising pharmacist to assume responsibility for the branch pharmacy;

(d) the availability of satisfactory physical facilities in which the branch pharmacy may operate; and

(e) the totality of conditions and circumstances which surround the request for designation.

(2) A branch pharmacy shall be licensed as a pharmacy branch of an existing Class A or B pharmacy licensed by the Division.

(3) The application for designation of a branch pharmacy shall be submitted by the licensed parent pharmacy seeking such designation. In the event that more than one licensed pharmacy makes application for designation of a branch pharmacy location at a previously undesignated location, the Division in collaboration with the Board shall review all applications for designation of the branch pharmacy and, if the location is approved, shall approve for licensure the applicant determined best able to serve the public interest as identified in Subsection (1).

(4) The application shall include the following:

(a) complete identifying information concerning the applying parent pharmacy;

(b) complete identifying information concerning the designated supervising pharmacist employed at the parent pharmacy;

(c) address and description of the facility in which the branch pharmacy is to be located;

(d) specific formulary to be stocked indicating with respect to each prescription drug, the name, the dosage strength and dosage units in which the drug will be prepackaged;

(e) complete identifying information concerning each person located at the branch pharmacy who will dispense prescription drugs in accordance with the approved protocol; and

(f) protocols under which the branch pharmacy will operate and its relationship with the parent pharmacy to include the following:

(i) the conditions under which prescription drugs will be stored, used and accounted for;

(ii) the method by which the drugs will be transported from parent pharmacy to the branch pharmacy and accounted for by the branch pharmacy; and

(iii) a description of how records will be kept with respect to:

(A) formulary;

(B) changes in formulary;

(C) record of drugs sent by the parent pharmacy;

(D) record of drugs received by the branch pharmacy;

(E) record of drugs dispensed;

(F) periodic inventories; and

(G) any other record contributing to an effective audit trail with respect to prescription drugs provided to the branch pharmacy.

R156-17b-614c. Operating Standards - Class B - Pharmaceutical Administration Facility.

In accordance with Subsections 58-17b-102(44) and 58-17b-601(1), the following applies with respect to prescription drugs which are held, stored or otherwise under the control of a pharmaceutical administration facility for administration to patients:

(1) The licensed pharmacist shall provide consultation on

all aspects of pharmacy services in the facility; establish a system of records of receipt and disposition of all controlled substances in sufficient detail to enable an accurate reconciliation; and determine that drug records are in order and that an account of all controlled substances is maintained and periodically reconciled.

(2) Authorized destruction of all prescription drugs shall be witnessed by the medical or nursing director or a designated physician, registered nurse or other licensed person employed in the facility and the consulting pharmacist or licensed pharmacy technician and must be in compliance with DEA regulations.

(3) Prescriptions for patients in the facility can be verbally requested by a licensed prescribing practitioner and may be entered as the prescribing practitioner's order; but the practitioner must personally sign the order in the facility record within 72 hours if a Schedule II controlled substance and within 30 days if any other prescription drug. The prescribing practitioner's verbal order may be copied and forwarded to a pharmacy for dispensing and may serve as the pharmacy's record of the prescription order.

(4) Prescriptions for controlled substances for patients in Class B pharmaceutical administration facilities shall be dispensed according to Title 58, Chapter 37, Utah Controlled Substances Act, and R156-37, Utah Controlled Substances Act Rules.

(5) Requirements for emergency drug kits shall include:

(a) an emergency drug kit may be used by pharmaceutical administration facilities. The emergency drug kit shall be considered to be a physical extension of the pharmacy supplying the emergency drug kit and shall at all times remain under the ownership of that pharmacy;

(b) the contents and quantity of drugs and supplies in the emergency drug kit shall be determined by the Medical Director or Director of Nursing of the pharmaceutical administration facility and the consulting pharmacist of the supplying pharmacy;

(c) a copy of the approved list of contents shall be conspicuously posted on or near the kit;

(d) the emergency kit shall be used only for bona fide emergencies and only when medications cannot be obtained from a pharmacy in a timely manner;

(e) records documenting the receipt and removal of drugs in the emergency kit shall be maintained by the facility and the pharmacy;

(f) the pharmacy shall be responsible for ensuring proper storage, security and accountability of the emergency kit and shall ensure that:

(i) the emergency kit is stored in a locked area and is locked itself; and

(ii) emergency kit drugs are accessible only to licensed physicians, physician assistants and nurses employed by the facility;

(g) the contents of the emergency kit, the approved list of contents and all related records shall be made freely available and open for inspection to appropriate representatives of the Division and the Utah Department of Health.

R156-17b-614d. Operating Standards - Class B - Nuclear Pharmacy.

In accordance with Subsection 58-17b-601(1), the operating standards for a Class B pharmacy designated as a nuclear pharmacy shall have the following:

(1) A nuclear pharmacy shall have the following:

(a) have applied for or possess a current Utah Radioactive Materials License; and

(b) adequate space and equipment commensurate with the scope of services required and provided.

(2) Nuclear pharmacies shall only dispense

radiopharmaceuticals that comply with acceptable standards of quality assurance.

(3) Nuclear pharmacies shall maintain a library commensurate with the level of radiopharmaceutical service to be provided.

(4) A licensed Utah pharmacist shall be immediately available on the premises at all times when the facility is open or available to engage in the practice of pharmacy.

(5) In addition to Utah licensure, the pharmacist shall have classroom and laboratory training and experience as required by the Utah Radiation Control Rules.

(6) This rule does not prohibit:

(a) a licensed pharmacy intern or technician from acting under the direct supervision of an approved preceptor who meets the requirements to supervise a nuclear pharmacy; or

(b) a Utah Radioactive Materials license from possessing and using radiopharmaceuticals for medical use.

(7) A hospital nuclear medicine department or an office of a physician/surgeon, osteopathic physician/surgeon, veterinarian, pediatric physician or dentist that has a current Utah Radioactive Materials License does not require licensure as a Class B pharmacy.

(8) A nuclear pharmacy preparing sterile compounds must follow the USP-NF Chapter 797 Compound for sterile preparations.

(9) A nuclear pharmacy preparing medications for a specific person shall be licensed as a Class B - nuclear pharmacy if located in Utah, and as a Class D pharmacy if located outside of Utah.

R156-17b-614f. Operating Standards - Class A, B, D, and E - Central Prescription Processing and Filling.

In accordance with Subsection 58-17b-601(1), the following operating standards apply to Class A, Class B, Class D and Class E pharmacies that engage in central prescription processing or central prescription filling. The operating standards include:

(1) A pharmacy may perform centralized prescription processing or centralized prescription filling services for a dispensing pharmacy if the parties:

(a) have common ownership or common administrative control; or

(b) have a written contract outlining the services to be provided and the responsibilities and accountabilities of each party in fulfilling the terms of said contract in compliance with federal and state laws and regulations; and

(c) share a common electronic file or have appropriate technology to allow access to sufficient information necessary or required to fill or refill a prescription drug order.

(2) The parties performing or contracting for centralized prescription processing or filling services shall maintain a policy and procedures manual, and documentation of implementation, which shall be made available to the Division upon inspection and which includes the following:

(a) a description of how the parties will comply with federal and state laws and regulations;

(b) appropriate records to identify the responsible pharmacists and the dispensing and counseling process;

(c) a mechanism for tracking the prescription drug order during each step in the dispensing process;

(d) a description of adequate security to protect the integrity and prevent the illegal use or disclosure of protected health information; and

(e) a continuous quality improvement program for pharmacy services designed to objectively and systematically monitor and evaluate the quality and appropriateness of patient care, pursue opportunities to improve patient care, and resolve identified problems.

R156-17b-615. Operating Standards - Class C Pharmacy - Pharmaceutical Wholesaler/Distributor and Pharmaceutical Manufacturer.

In accordance with Subsections 58-17b-102(47) and 58-17b-601(1), the operating standards for Class C pharmacies designated as pharmaceutical wholesaler/distributor and pharmaceutical manufacturer licensees includes the following:

(1) Each pharmaceutical wholesaler or manufacturer that distributes or manufactures drugs or medical devices in Utah shall be licensed by the Division. A separate license shall be obtained for each separate location engaged in the distribution or manufacturing of prescription drugs. Business names cannot be identical to the name used by another unrelated wholesaler licensed to purchase drugs and devices in Utah.

(2) Manufacturers distributing only their own FDA-approved:

(a) prescription drugs or prescription drugs that are co-licensed products satisfy the requirement in Subsection (1) by registering their establishment with the FDA pursuant to 21 CFR Part 207 and submitting the information required by 21 CFR Part 205 including any amendments thereto, to the Division; or

(b) devices or devices that are co-licensed products, including products packaged with devices, such as convenience kits, that are exempt from the definition of transaction in 21 USC sec. 360eee (24)(B)(xii-xvi) satisfy the requirement in Subsection (1) by registering their establishment with the FDA pursuant to 21 CFR.

(3) An applicant for licensure as a pharmaceutical wholesaler distributor shall provide the following minimum information:

(a) All trade or business names used by the licensee (including "doing business as" and "formerly known as");

(b) Name of the owner and operator of the license as follows:

(i) if a person, the name, business address, social security number and date of birth;

(ii) if a partnership, the name, business address, and social security number and date of birth of each partner, and the partnership's federal employer identification number;

(iii) if a corporation, the name, business address, social security number and date of birth, and title of each corporate officer and director, the corporate names, the name of the state of incorporation, federal employer identification number, and the name of the parent company, if any, but if a publicly traded corporation, the social security number and date of birth for each corporate officer shall not be required;

(iv) if a sole proprietorship, the full name, business address, social security number and date of birth of the sole proprietor and the name and federal employer identification number of the business entity;

(v) if a limited liability company, the name of each member, social security number of each member, the name of each manager, the name of the limited liability company and federal employer identification number, and the name of the state where the limited liability company was organized; and

(c) any other relevant information required by the Division.

(4) The licensed facility need not be under the supervision of a licensed pharmacist, but shall be under the supervision of a designated representative who meets the following criteria:

(a) is at least 21 years of age;

(b) has been employed full time for at least three years in a pharmacy or with a pharmaceutical wholesaler in a capacity related to the dispensing and distribution of, and recordkeeping related to prescription drugs;

(c) is employed by the applicant full time in a managerial level position;

(d) is actively involved in and aware of the actual daily

operation of the pharmaceutical wholesale distribution;

(e) is physically present at the facility during regular business hours, except when the absence of the designated representative is authorized, including but not limited to, sick leave and vacation leave; and

(f) is serving in the capacity of a designated representative for only one licensee at a time.

(5) The licensee shall provide the name, business address, and telephone number of a person to serve as the designated representative for each facility of the pharmaceutical wholesaler that engages in the distribution of drugs or devices.

(6) All pharmaceutical wholesalers and manufacturer shall publicly display or have readily available all licenses and the most recent inspection report administered by the Division.

(7) All Class C pharmacies shall:

(a) be of suitable size and construction to facilitate cleaning, maintenance and proper operations;

(b) have storage areas designed to provide adequate lighting, ventilation, sanitation, space, equipment and security conditions;

(c) have the ability to control temperature and humidity within tolerances required by all prescription drugs and prescription drug precursors handled or used in the distribution or manufacturing activities of the applicant or licensee;

(d) provide for a quarantine area for storage of prescription drugs and prescription drug precursors that are outdated, damaged, deteriorated, misbranded, adulterated, opened or unsealed containers that have once been appropriately sealed or closed or in any other way unsuitable for use or entry into distribution or manufacturing;

(e) be maintained in a clean and orderly condition; and

(f) be free from infestation by insects, rodents, birds or vermin of any kind.

(8) Each facility used for wholesale drug distribution or manufacturing of prescription drugs shall:

(a) be secure from unauthorized entry;

(b) limit access from the outside to a minimum in conformance with local building codes, life and safety codes and control access to persons to ensure unauthorized entry is not made;

(c) limit entry into areas where prescription drugs, prescription drug precursors, or prescription drug devices are held to authorized persons who have a need to be in those areas;

(d) be well lighted on the outside perimeter;

(e) be equipped with an alarm system to permit detection of entry and notification of appropriate authorities at all times when the facility is not occupied for the purpose of engaging in distribution or manufacturing of prescription drugs; and

(f) be equipped with security measures, systems and procedures necessary to provide reasonable security against theft and diversion of prescription drugs or alteration or tampering with computers and records pertaining to prescription drugs or prescription drug precursors.

(9) Each facility shall provide the storage of prescription drugs, prescription drug precursors, and prescription drug devices in accordance with the following:

(a) all prescription drugs and prescription drug precursors shall be stored at appropriate temperature, humidity and other conditions in accordance with labeling of such prescription drugs or prescription drug precursors or with requirements in the USP-NF;

(b) if no storage requirements are established for a specific prescription drug, prescription drug precursor, or prescription drug devices, the products shall be held in a condition of controlled temperature and humidity as defined in the USP-NF to ensure that its identity, strength, quality and purity are not adversely affected; and

(c) there shall be established a system of manual, electromechanical or electronic recording of temperature and

humidity in the areas in which prescription drugs, prescription drug precursors, and prescription drug devices are held to permit review of the record and ensure that the products have not been subjected to conditions that are outside of established limits.

(10) Each person who is engaged in pharmaceutical wholesale distribution of prescription drugs for human use that leave, or have ever left, the normal distribution channel shall, before each pharmaceutical wholesale distribution of such drug, provide a pedigree to the person who receives such drug. A retail pharmacy or pharmacy warehouse shall comply with the requirements of this section only if the pharmacy engages in pharmaceutical wholesale distribution of prescription drugs. The pedigree shall:

(a) include all necessary identifying information concerning each sale in the chain of distribution of the product from the manufacturer, through acquisition and sale by any pharmaceutical wholesaler, until sale to a pharmacy or other person dispensing or administering the prescription drug. At a minimum, the necessary chain of distribution information shall include:

(i) name, address, telephone number, and if available, the email address of each owner of the prescription drug, and each pharmaceutical wholesaler of the prescription drug;

(ii) name and address of each location from which the product was shipped, if different from the owner's;

(iii) transaction dates;

(iv) name of the prescription drug;

(v) dosage form and strength of the prescription drug;

(vi) size of the container;

(vii) number of containers;

(viii) lot number of the prescription drug;

(ix) name of the manufacturer of the finished dose form; and

(x) National Drug Code (NDC) number.

(b) be maintained by the purchaser and the pharmaceutical wholesaler for five years from the date of sale or transfer and be available for inspection or use upon a request of an authorized officer of the law.

(11) Each facility shall comply with the following requirements:

(a) in general, each person who is engaged in pharmaceutical wholesale distribution of prescription drugs shall establish and maintain inventories and records of all transactions regarding the receipt and distribution or other disposition of the prescription drugs. These records shall include pedigrees for all prescription drugs that leave the normal distribution channel;

(b) upon receipt, each outside shipping container containing prescription drugs, prescription drug precursors, or prescription drug devices shall be visibly examined for identity and to prevent the acceptance of prescription drugs, prescription drug precursors, or prescription drug devices that are contaminated, reveal damage to the containers or are otherwise unfit for distribution:

(i) prescription drugs, prescription drug precursors, or prescription drug devices that are outdated, damaged, deteriorated, misbranded, adulterated or in any other way unfit for distribution or use in manufacturing shall be quarantined and physically separated from other prescription drugs, prescription drug precursors or prescription drug devices until they are appropriately destroyed or returned to their supplier; and

(ii) any prescription drug or prescription drug precursor whose immediate sealed or outer secondary sealed container has been opened or in any other way breached shall be identified as such and shall be quarantined and physically separated from other prescription drugs and prescription drug precursors until they are appropriately destroyed or returned to their supplier;

(c) each outgoing shipment shall be carefully inspected for

identity of the prescription drug products or devices and to ensure that there is no delivery of prescription drugs or devices that have been damaged in storage or held under improper conditions:

(i) if the conditions or circumstances surrounding the return of any prescription drug or prescription drug precursor cast any doubt on the product's safety, identity, strength, quality or purity, then the drug shall be appropriately destroyed or returned to the supplier, unless examination, testing or other investigation proves that the product meets appropriate and applicable standards related to the product's safety, identity, strength, quality and purity;

(ii) returns of expired, damaged, recalled, or otherwise non-saleable prescription drugs shall be distributed by the receiving pharmaceutical wholesale distributor only to the original manufacturer or a third party returns processor that is licensed as a pharmaceutical wholesale distributor under this chapter;

(iii) returns or exchanges of prescription drugs (saleable or otherwise), including any redistribution by a receiving pharmaceutical wholesaler, shall not be subject to the pedigree requirements, so long as they are exempt from the pedigree requirement under the FDA's Prescription Drug Marketing Act guidance or regulations; and

(d) licensee under this Act and pharmacies or other persons authorized by law to dispense or administer prescription drugs for use by a patient shall be accountable for administering their returns process and ensuring that all aspects of their operation are secure and do not permit the entry of adulterated and counterfeit prescription drugs.

(12) A manufacturer or pharmaceutical wholesaler shall furnish prescription drugs only to a person licensed by the Division or to another appropriate state licensing authority to possess, dispense or administer such drugs for use by a patient.

(13) Prescription drugs furnished by a manufacturer or pharmaceutical wholesaler shall be delivered only to the business address of a person described in Subsections R156-17b-102(19)(c) and R156-17b-615(13), or to the premises listed on the license, or to an authorized person or agent of the licensee at the premises of the manufacturer or pharmaceutical wholesaler if the identity and authority of the authorized agent is properly established.

(14) Each facility shall establish and maintain records of all transactions regarding the receipt and distribution or other disposition of prescription drugs and prescription drug precursors and shall make inventories of prescription drugs and prescription drug precursors and required records available for inspection by authorized representatives of the federal, state and local law enforcement agencies in accordance with the following:

(a) there shall be a record of the source of the prescription drugs or prescription drug precursors to include the name and principal address of the seller or transferor and the address of the location from which the drugs were shipped;

(b) there shall be a record of the identity and quantity of the prescription drug or prescription drug precursor received, manufactured, distributed or shipped or otherwise disposed of by specific product and strength;

(c) there shall be a record of the dates of receipt and distribution or other disposal of any product;

(d) there shall be a record of the identity of persons to whom distribution is made to include name and principal address of the receiver and the address of the location to which the products were shipped;

(e) inventories of prescription drugs and prescription drug precursors shall be made available during regular business hours to authorized representatives of federal, state and local law enforcement authorities;

(f) required records shall be made available for inspection

during regular business hours to authorized representatives of federal, state and local law enforcement authorities and such records shall be maintained for a period of two years following disposition of the products; and

(g) records that are maintained on site or immediately retrievable from computer or other electronic means shall be made readily available for authorized inspection during the retention period; or if records are stored at another location, they shall be made available within two working days after request by an authorized law enforcement authority during the two year period of retention.

(15) Each facility shall establish, maintain and adhere to written policies and procedures that shall be followed for the receipt, security, storage, inventory, manufacturing, distribution or other disposal of prescription drugs or prescription drug precursors, including policies and procedures for identifying, recording and reporting losses or thefts, and for correcting all errors and inaccuracies in inventories. In addition, the policies shall include the following:

(a) a procedure whereby the oldest approved stock of a prescription drug or precursor product is distributed or used first with a provision for deviation from the requirement if such deviation is temporary and appropriate;

(b) a procedure to be followed for handling recalls and withdrawals of prescription drugs adequate to deal with recalls and withdrawals due to:

(i) any action initiated at the request of the FDA or other federal, state or local law enforcement or other authorized administrative or regulatory agency;

(ii) any voluntary action to remove defective or potentially defective drugs from the market; or

(iii) any action undertaken to promote public health, safety or welfare by replacement of existing product with an improved product or new package design;

(c) a procedure to prepare for, protect against or handle any crisis that affects security or operation of any facility in the event of strike, fire, flood or other natural disaster or other situations of local, state or national emergency;

(d) a procedure to ensure that any outdated prescription drugs or prescription drug precursors shall be segregated from other drugs or precursors and either returned to the manufacturer, other appropriate party or appropriately destroyed;

(e) a procedure for providing for documentation of the disposition of outdated, adulterated or otherwise unsafe prescription drugs or prescription drug precursors and the maintenance of that documentation available for inspection by authorized federal, state or local authorities for a period of five years after disposition of the product;

(f) a procedure for identifying, investigating and reporting significant drug inventory discrepancies (involving counterfeit drugs suspected of being counterfeit, contraband, or suspect of being contraband) and reporting of such discrepancies within three (3) business days to the Division and/or appropriate federal or state agency upon discovery of such discrepancies; and

(g) a procedure for reporting criminal or suspected criminal activities involving the inventory of drugs and devices to the Division, FDA and if applicable, Drug Enforcement Administration (DEA), within three (3) business days.

(16) Each facility shall establish, maintain and make available for inspection by authorized federal, state and local law enforcement authorities, lists of all officers, directors, managers and other persons in charge which lists shall include a description of their duties and a summary of their background and qualifications.

(17) Each facility shall comply with laws including:

(a) operating within applicable federal, state and local laws and regulations;

(b) permitting the state licensing authority and authorized federal, state and local law enforcement officials, upon presentation of proper credentials, to enter and inspect their premises and delivery vehicles and to audit their records and written operating policies and procedures, at reasonable times and in a reasonable manner, to the extent authorized by law; and

(c) obtaining a controlled substance license from the Division and registering with the Drug Enforcement Administration (DEA) if they engage in distribution or manufacturing of controlled substances and shall comply with all federal, state and local regulations applicable to the distribution or manufacturing of controlled substances.

(18) Each facility shall be subject to and shall abide by applicable federal, state and local laws that relate to the salvaging or reprocessing of prescription drug products.

(19) A Class C pharmacy shall not be located in the same building as a separately licensed Class A, B, D, or E pharmacy unless the two pharmacies are located in different suites as recognized by the United States Postal Service. Two Class C pharmacies may be located at the same address in the same suite if the pharmacies:

(a) are under the same ownership;

(b) have processes and systems for separating and securing all aspects of the operation; and

(c) have traceability with a clear audit trail that distinguishes a pharmacy's purchases and distributions.

R156-17b-616. Operating Standards - Class D Pharmacy - Out of State Mail Order Pharmacies.

(1) In accordance with Subsections 58-1-301(3) and 58-17b-306(2), an application for licensure as a Class D pharmacy shall include:

(a) a pharmacy care protocol that includes the operating standards established in Subsections R156-17b-610(1) and (8) and R156-17b-612(1) through (4);

(b) a copy of the pharmacist's license for the PIC; and

(c) a copy of the most recent state inspection or NABP inspection completed as part of the NABP Verified Pharmacy Program (VPP) showing the status of compliance with the laws and regulations for physical facility, records and operations.

(2) An out of state mail order pharmacy that compounds shall follow the USP-NF Chapter 795 Compounding of non-sterile preparations and Chapter 797 Compounding of sterile preparations.

R156-17b-617a. Class E Pharmacy Operating Standards - General Provisions.

(1) In accordance with Section 58-17b-302 and Subsection 58-17b-601(1), Class E pharmacies shall have a written pharmacy care protocol that includes:

(a) the identity of the supervisor or director;

(b) a detailed plan of care;

(c) the identity of the drugs to be purchased, stored, used and accounted for; and

(d) the identity of any licensed healthcare provider associated with the operation.

(2) A Class E pharmacy preparing sterile compounds shall follow the USP-NF Chapter 797 Compounding for sterile preparations.

R156-17b-617b. Class E Pharmacy Operating Standards - Analytical Laboratory.

In accordance with Section 58-17b-302 and Subsection 58-17b-601(1), an analytical laboratory shall:

(1) be of suitable size and construction to facilitate cleaning, maintenance and proper operations;

(2) provide adequate lighting, ventilation, sanitation, space, equipment and security conditions;

(3) maintain a list of drugs that will be purchased, stored,

used and accounted for;

(4) maintain a list of licensed healthcare providers associated with the operation of the business;

(5) possess prescription drugs for the purpose of analysis; and

(6) take measures to prevent the theft or loss of controlled substances.

R156-17b-617c. Class E Pharmacy Operating Standards - Animal Control or Animal Narcotic Detection Training.

(1) In accordance with Section 58-17b-302 and Subsection 58-17b-601(1), an animal control or animal narcotic detection training facility shall:

(a) maintain for immediate retrieval a perpetual inventory of all drugs including controlled substances that are purchased, stored, processed and administered;

(b) maintain for immediate retrieval a current list of authorized employees and their training with regards to the handling and use of legend drugs and/or controlled substances in relation to euthanasia, immobilization, or narcotic detection training of animals;

(c) maintain, for immediate retrieval documentation of all required materials pertaining to legitimate animal scientific drug research, guidance policy and other relevant documentation from the agency's Institutional Review Board, if applicable;

(d) maintain stocks of legend drugs and controlled substances to the smallest quantity needed for efficient operation to conduct animal euthanasia, immobilization, or narcotic detection training purposes;

(e) maintain all legend drugs and controlled substances in an area within a building having perimeter security that limits access during working hours, provides adequate security after working hours, and has the following security controls:

(i) a permanently secured safe or steel cabinet substantially constructed with self-closing and self-locking doors employing either multiple position combination or key lock type locking mechanisms; and

(ii) requisite key control, combination limitations, and change procedures;

(f) have a responsible party who is the only person authorized to purchase and reconcile legend drugs and controlled substances and is responsible for the inventory of the animal control or animal narcotic detection training facility pharmacy;

(g) ensure that only defined and approved individuals pursuant to the written facility protocol have access to legend drugs and controlled substances; and

(h) develop and maintain written policies and procedures for immediate retrieval that include the following:

(i) the type of activity conducted with regards to legend drugs and/or controlled substances;

(ii) how medications are purchased, inventoried, prepared and used in relation to euthanasia, immobilization, or narcotic detection training of animals;

(iii) the type, form and quantity of legend drugs and/or controlled substances handled;

(iv) the type of safe or equally secure enclosures or other storage system used for the storage and retrieval of legend drugs and/or controlled substances;

(v) security measures in place to protect against theft or loss of legend drugs and controlled substances;

(vi) adequate supervision of employees having access to manufacturing and storage areas;

(vii) maintenance of records documenting the initial and ongoing training of authorized employees with regard to all applicable protocols;

(viii) maintenance of records documenting all approved and trained authorized employees who may have access to the legend drugs and controlled substances; and

(ix) procedures for allowing the presence of business guests, visitors, maintenance personnel, and non-employee service personnel.

R156-17b-617d. Class E Pharmacy Operating Standards-Durable Medical Equipment.

(1) In accordance with Section 58-17b-302 and Subsection 58-17b-601(1), durable medical equipment facility shall:

(a) be of suitable size and construction to facilitate cleaning, maintenance and proper operations;

(b) provide adequate lighting, ventilation, sanitation, space, equipment and security conditions;

(c) be equipped to permit the orderly storage of durable medical equipment in a manner to permit clear identification, separation and easy retrieval of products and an environment necessary to maintain the integrity of the product inventory;

(d) be equipped to permit practice within the standards and ethics of the profession as dictated by the usual and ordinary scope of practice to be conducted within that facility;

(e) maintain prescription forms and records for a period of five years;

(f) be locked and enclosed in such a way as to bar entry by the public or any non-personnel when the facility is closed; and

(g) post the license of the facility in full view of the public.

(2) A licensed practitioner who administers durable medical equipment to a patient or animal is not engaging in the practice of pharmacy, and does not require a license as a Class E pharmacy.

R156-17b-617e. Class E Pharmacy Operating Standards - Human Clinical Investigational Drug Research Facility.

(1) In accordance with Section 58-17b-302 and Subsection 58-17b-601(1), a human clinical investigational drug research facility licensed as a Class E Pharmacy shall, in addition to the requirements contained in Subsection R156-17b-617a, conduct operations in accordance with the operating standards set forth in 21 CFR Part 312, April 1, 2012 edition, which are hereby incorporated by reference.

(2) In accordance with Subsections 58-37-6(2)(b) and (3)(a)(i), persons licensed to conduct research with controlled substances in Schedules I-V within this state may possess, manufacture, produce, distribute, prescribe, dispense, administer, conduct research with, or perform laboratory analysis upon those substances to the extent authorized by their license.

(3) In accordance with Subsection 58-37-6(2), the following persons are not required to obtain a license and may lawfully possess controlled substances included in Schedules II-V:

(a) an agent or employee acting in the usual course of the person's business or employment, and

(b) an ultimate user, or any person who possesses any controlled substance pursuant to a lawful order of a practitioner.

(4) A separate license is required at each principal place of business or professional practice where the applicant manufactures, produces, distributes, dispenses, conducts research with, or performs laboratory analysis upon controlled substances.

R156-17b-617f. Class E Pharmacy Operating Standards - Medical Gas Provider.

In accordance with Section 58-17b-302 and Subsection 58-17b-601(1), a medical gas facility shall:

(a) develop standard operating policy and procedures manual;

(b) conduct training and maintain evidence of employee training programs and completion certificates;

(c) maintain documentation and records of all transactions

to include:

(i) batch production records

(ii) certificates of analysis

(iii) dates of calibration of gauges;

(d) provide adequate space for orderly placement of equipment and finished product;

(e) maintain gas tanks securely;

(f) designate return and quarantine areas for separation of products;

(g) label all products;

(h) fill cylinders without using adapters; and

(i) comply with all FDA standards and requirements.

R156-17b-618. Change in Ownership or Location.

(1) In accordance with Section 58-17b-614, except for changes in ownership caused by a change in the stockholders in corporations that are publicly listed and whose stock is publicly traded, a licensed pharmaceutical facility shall make application for a new license and receive approval from the Division no later than ten business days prior to any of the following proposed changes:

(a) location or address, except for a reassignment of a new address by the United States Postal Service that does not involve any change of location;

(b) name, except for a doing-business-as (DBA) name change that is properly registered with the Division of Corporations and filed with the Division of Occupational and Professional Licensing; or

(c) ownership when one of the following occurs:

(i) a change in entity type; or

(ii) the sale or transfer of 51% or more of an entity's ownership or membership interest to another individual or entity.

(2) Upon approval of the change in location, name, or ownership, and the issuance of a new license, the original license shall be surrendered to the Division.

(3) Upon approval of the name change, the original licenses shall be surrendered to the Division.

R156-17b-619. Operating Standards - Third Party Payors.

Reserved.

R156-17b-620. Operating Standards - Automated Pharmacy System.

In accordance with Section 58-17b-621, automated pharmacy systems can be utilized in licensed pharmacies, remote locations under the jurisdiction of the Division and licensed health care facilities where legally permissible and shall comply with the following provisions:

(1) Documentation as to type of equipment, serial numbers, content, policies and procedures and location shall be maintained on site in the pharmacy for review upon request of the Division. Such documentation shall include:

(a) name and address of the pharmacy or licensed health care facility where the automated pharmacy system is being used;

(b) manufacturer's name and model;

(c) description of how the device is used;

(d) quality assurance procedures to determine continued appropriate use of the automated device; and

(e) policies and procedures for system operation, safety, security, accuracy, patient confidentiality, access and malfunction.

(2) Automated pharmacy systems should be used only in settings where there is an established program of pharmaceutical care that ensures that before dispensing, or removal from an automated storage and distribution device, a pharmacist reviews all prescription or medication orders unless a licensed independent practitioner controls the ordering, preparation and

administration of the medication; or in urgent situations when the resulting delay would harm the patient including situations in which the patient experiences a sudden change in clinical status.

(3) All policies and procedures must be maintained in the pharmacy responsible for the system and, if the system is not located within the facility where the pharmacy is located, at the location where the system is being used.

(4) Automated pharmacy systems shall have:

(a) adequate security systems and procedures to:

- (i) prevent unauthorized access;
- (ii) comply with federal and state regulations; and
- (iii) prevent the illegal use or disclosure of protected health information;

(b) written policies and procedures in place prior to installation to ensure safety, accuracy, security, training of personnel, and patient confidentiality and to define access and limits to access to equipment and medications.

(5) Records and electronic data kept by automated pharmacy systems shall meet the following requirements:

(a) all events involving the contents of the automated pharmacy system must be recorded electronically;

(b) records must be maintained by the pharmacy for a period of five years and must be readily available to the Division. Such records shall include:

- (i) identity of system accessed;
- (ii) identify of the individual accessing the system;
- (iii) type of transaction;
- (iv) name, strength, dosage form and quantity of the drug accessed;

(v) name of the patient for whom the drug was ordered; and

(vi) such additional information as the PIC may deem necessary.

(6) Access to and limits on access to the automated pharmacy system must be defined by policy and procedures and must comply with state and federal regulations.

(7) The PIC or pharmacist designee shall have the sole responsibility to:

- (a) assign, discontinue or change access to the system;
- (b) ensure that access to the medications comply with state and federal regulations; and

(c) ensure that the automated pharmacy system is filled and stocked accurately and in accordance with established written policies and procedures.

(8) The filling and stocking of all medications in the automated pharmacy system shall be accomplished by qualified licensed healthcare personnel under the supervision of a licensed pharmacist.

(9) A record of medications filled and stocked into an automated pharmacy system shall be maintained for a period of five years and shall include the identification of the persons filling, stocking and checking for accuracy.

(10) All containers of medications stored in the automated pharmacy system shall be packaged and labeled in accordance with federal and state laws and regulations.

(11) All aspects of handling controlled substances shall meet the requirements of all state and federal laws and regulations.

(12) The automated pharmacy system shall provide a mechanism for securing and accounting for medications removed from and subsequently returned to the automated pharmacy system, all in accordance with existing state and federal law. Written policies and procedures shall address situations in which medications removed from the system remain unused and must be secured and accounted for.

(13) The automated pharmacy system shall provide a mechanism for securing and accounting for wasted medications or discarded medications in accordance with existing state and

federal law. Written policies and procedures shall address situations in which medications removed from the system are wasted or discarded and must be secured.

R156-17b-621. Operating Standards - Pharmacist Administration - Training.

(1) In accordance with Subsection 58-17b-502(9), appropriate training for the administration of a prescription drug includes:

- (a) current Basic Life Support (BLS) certification; and
- (b) successful completion of a training program which includes at a minimum:

(i) didactic and practical training for administering injectable drugs;

(ii) the current Advisory Committee on Immunization Practices (ACIP) of the United States Center for Disease Control and Prevention guidelines for the administration of immunizations; and

- (iii) the management of an anaphylactic reaction.

(2) Sources for the appropriate training include:

- (a) ACPE approved programs; and
- (b) curriculum-based programs from an ACPE accredited college of pharmacy, state or local health department programs and other Board recognized providers.

(3) Training is to be supplemented by documentation of two hours of continuing education related to the area of practice in each preceding renewal period.

(4) The "Vaccine Administration Protocol: Standing Order to Administer Immunizations and Emergency Medications", adopted March 27, 2012, by the Division in collaboration with the Utah State Board of Pharmacy, as posted on the Division website, is the guideline or standard for pharmacist administration of vaccines and emergency medications.

R156-17b-622. Standards - Dispensing Training Program.

(1) In accordance with Subsection R156-17b-102(17), a formal or on-the-job dispensing training program completed by a DMP designee is one that covers the following topics to the extent that the topics are relevant and current to the DMP practice where the DMP designee is employed:

- (a) role of the DMP designee;
- (b) laws affecting prescription drug dispensing;
- (c) pharmacology including the identification of drugs by trade and generic names, and therapeutic classifications;
- (d) pharmaceutical terminology, abbreviations and symbols;

- (e) pharmaceutical calculations;
- (f) drug packaging and labeling;
- (g) computer applications in the pharmacy;
- (h) sterile and non-sterile compounding;
- (i) medication errors and safety;
- (j) prescription and order entry and fill process;
- (k) pharmacy inventory management; and
- (l) pharmacy billing and reimbursement.

(2) Documentation demonstrating successful completion of a formal or on-the-job dispensing training program shall include the following information:

- (a) name of individual trained;
- (b) name of individual or entity that provided training;
- (c) list of topics covered during the training program; and
- (d) training completion date.

R156-17b-623. Standards - Approved Cosmetic Drugs and Injectable Weight Loss Drugs for Dispensing Medical Practitioners.

(1) A cosmetic drug that may be dispensed by a DMP in accordance with Section 58-17b-803 is limited to Latisse.

(2) An injectable weight loss drug that may be dispensed by a DMP in accordance with Section 58-17b-803 is limited to

human chorionic gonadotropin.

R156-17b-624. Operating Standards. Repackaged or Compounded Prescription Drugs - Sale to a Practitioner for Office Use.

Pursuant to Section 58-17b-624, a pharmacy may repackage or compound a prescription drug for sale to a practitioner for office use provided that it is in compliance with all applicable federal and state laws and regulations regarding the practice of pharmacy, including, but not limited to the Food, Drug, and Cosmetic Act, 21 U.S.C.A 301 et seq.

KEY: pharmacists, licensing, pharmacies

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R156. Commerce, Occupational and Professional Licensing.**R156-37. Utah Controlled Substances Act Rule.****R156-37-101. Title.**

This rule is known as the "Utah Controlled Substances Act Rule."

R156-37-102. Definitions.

In addition to the definitions in Title 58, Chapters 1 and 37, as used in Title 58, Chapters 1 and 37, or this rule:

(1) "DEA" means the Drug Enforcement Administration of the United States Department of Justice.

(2) "NABP" means the National Association of Boards of Pharmacy.

(3) "Principle place of business or professional practice", as used in Subsection 58-37-6(2)(e), means any location where controlled substances are received or stored.

(4) "Schedule II controlled stimulant" means any material, compound, mixture or preparation listed in Subsection 58-37-4(2)(b)(iii).

(5) "Unprofessional conduct", as defined in Title 58 is further defined in accordance with Subsections 58-1-203(1)(e) and 58-37-6(1)(a), in Section R156-37-502.

R156-37-103. Purpose - Authority.

This rule is adopted by the Division under the authority of Subsections 58-1-106(1)(a) and 58-37-6(1)(a) to enable the Division to administer Title 58, Chapter 37.

R156-37-104. Organization - Relationship to Rule R156-1.

The organization of this rule and its relationship to Rule R156-1 is as described in Section R156-1-107.

R156-37-301. License Classifications - Restrictions.

(1) Consistent with the provisions of law, the Division may issue a controlled substance license to manufacture, produce, distribute, dispense, prescribe, obtain, administer, analyze, or conduct research with controlled substances in Schedules I, II, III, IV, or V to qualified persons. Licenses shall be issued to qualified persons in the following categories:

- (a) pharmacist;
- (b) optometrist;
- (c) podiatric physician;
- (d) dentist;
- (e) osteopathic physician and surgeon;
- (f) physician and surgeon;
- (g) physician assistant;
- (h) veterinarian;
- (i) advanced practice registered nurse or advanced practice registered nurse-certified registered nurse anesthetist;
- (j) certified nurse midwife;
- (k) naturopathic physician;
- (l) Class A pharmacy-retail operations located in Utah;
- (m) Class B pharmacy located in Utah providing services to a target population unique to the needs of the healthcare services required by the patient, including:

- (i) closed door pharmacy;
- (ii) hospital clinic pharmacy;
- (iii) methadone clinic pharmacy;
- (iv) nuclear pharmacy;
- (v) branch pharmacy;
- (vi) hospice facility pharmacy;
- (vii) veterinarian pharmaceutical facility pharmacy;
- (viii) pharmaceutical administration facility pharmacy;
- (ix) sterile product preparation facility pharmacy; and
- (x) dispensing medical practitioner clinic pharmacy.
- (n) Class C pharmacy engaged in:
 - (i) manufacturing;
 - (ii) producing;
 - (iii) wholesaling;

- (iv) distributing; and
- (v) reverse distributing.
- (o) Class D Out-of-state mail order pharmacies.
- (p) Class E pharmacy including:
 - (i) medical gases provider;
 - (ii) analytical laboratory pharmacy;
 - (iii) animal control pharmacy;
 - (iv) human clinical investigational drug research facility pharmacy; and
 - (v) animal narcotic detection training facility pharmacy.
- (q) Utah Department of Corrections for the conduct of execution by the administration of lethal injection under its statutory authority and in accordance with its policies and procedures.

(2) A license may be restricted to the extent determined by the Division, in collaboration with appropriate licensing boards, that a restriction is necessary to protect the public health, safety or welfare, or the welfare of the licensee. A person receiving a restricted license shall manufacture, produce, obtain, distribute, dispense, prescribe, administer, analyze, or conduct research with controlled substances only to the extent of the terms and conditions under which the restricted license is issued by the Division.

R156-37-302. Qualifications for Licensure - Application Requirements.

(1) An applicant for a controlled substance license shall:

- (a) submit an application in a form as prescribed by the Division; and

(b) shall pay the required fee as established by the Division under the provisions of Section 63J-1-504.

(2) Any person seeking a controlled substance license shall be currently licensed by the state in the appropriate professional license classification as listed in R156-37-301 and shall maintain that license classification as current at all times while holding a controlled substance license.

(3) The Division and the reviewing board may request from the applicant information that is reasonable and necessary to permit an evaluation of the applicant's:

- (a) qualifications to engage in practice with controlled substances; and
- (b) the public interest in the issuance of a controlled substance license to the applicant.

(4) To determine if an applicant is qualified for licensure, the Division may assign the application to a qualified and appropriate licensing board for review and recommendation to the Division with respect to issuance of a license.

R156-37-303. Qualifications for Licensure - Site Inspections - Investigations.

The Division shall have the right to conduct site inspections, review research protocol, conduct interviews with persons knowledgeable about the applicant, and conduct any other investigation which is reasonable and necessary to determine the applicant is of good moral character and qualified to receive a controlled substance license.

R156-37-305. Qualification for Licensure -- Drug Enforcement Administration (DEA) Registration.

(1) An individual who obtains a controlled substance license except those individuals described in Subsection (2) below, shall obtain a DEA registration within 120 days of the date the controlled substance license is issued.

(2) Any controlled substance licensee who obtains prior written consent of the licensee's employer to use the employer's hospital or institution DEA registration to administer and/or prescribe controlled substances, is not required to obtain an individual practitioner DEA registration.

R156-37-306. Exemption from Licensure -- Law Enforcement Personnel, University Research, Narcotic Detection Training of Animals, and Animal Control.

In accordance with Subsection 58-37-6(2)(d), the following persons are exempt from licensure under Title 58, Chapter 37:

(1) Law enforcement agencies and their sworn personnel are exempt from the licensing requirements of the Controlled Substance Act to the extent their official duties require them to possess controlled substances; they act within the scope of their enforcement responsibilities; they maintain accurate records of controlled substances that come into their possession; and they maintain an effective audit trail. Nothing herein shall authorize law enforcement personnel to purchase or possess controlled substances for administration to animals unless the purchase or possession is in accordance with a duly issued controlled substance license.

(2) Individuals and entities engaged in research using pharmaceuticals as defined in Subsection 58-17b-102(65) within a research facility as defined in Subsection R156-17b-102(49).

(3) Individuals employed by a facility engaged in the following activities if the facility employing that individual has a controlled substance license in Utah, a DEA registration number, and uses the controlled substances according to a written protocol:

- (a) narcotic detection training of animals for law enforcement use; or
- (b) animal control, including:
 - (i) animal euthanasia; or
 - (ii) animal immobilization.

R156-37-401. Grounds for Denial of License - Disciplinary Proceedings.

Grounds for refusing to issue a license to an applicant, for refusing to renew the license of a licensee, for revoking, suspending, restricting, or placing on probation the license of a licensee, for issuing a public or private reprimand to a licensee, and for issuing a cease and desist order shall be in accordance with Section 58-1-401.

R156-37-402. Continuing Professional Education for Controlled Substance Prescribers.

In accordance with Section 58-37-6.5, qualified continuing professional education requirements for controlled substance prescribers are further established as follows:

(1) All licensed controlled substance prescribers shall complete four hours of qualified continuing professional education during each two year period of licensure.

(2) Qualified continuing professional education hours for licensees who have not been licensed for the entire two year period will be prorated from the date of licensure.

(3) Continuing education under this section shall:

(a) be prepared and presented by individuals who are qualified by education, training and experience to provide the controlled substance prescriber continuing education;

(b) have a method of verification of attendance and a post course knowledge assessment or examination; and

(c) teach content as set forth in Subsection 58-37-6.5(2).

(4) Credit for continuing education shall be recognized in accordance with the following:

(a) continuing education shall be presented by an organization accredited to provide continuing medical education as set forth in Subsection 58-37-6.5(1)(b)(ii) and be approved as set forth in Subsection 58-37-6.5(1)(b)(iii); and

(b) unlimited hours shall be recognized for continuing education completed in blocks of time of not less than 50 minutes.

(5) A licensee shall be responsible for maintaining competent records of completed qualified continuing professional education for a period of four years after close of

the two year period to which the records pertain.

R156-37-502. Unprofessional Conduct.

"Unprofessional conduct" includes:

(1) a licensee with authority to prescribe or administer controlled substances:

(a) prescribing or administering to himself any Schedule II or III controlled substance that is not lawfully prescribed by another licensed practitioner having authority to prescribe the drug;

(b) prescribing or administering a controlled substance for a condition he is not licensed or competent to treat;

(2) violating any federal or state law relating to controlled substances;

(3) failing to deliver to the Division all controlled substance license certificates issued by the Division to the Division upon an action that revokes, suspends or limits the license;

(4) failing to maintain controls over controlled substances that would be considered by a prudent practitioner to be effective against diversion, theft, or shortage of controlled substances;

(5) being unable to account for shortages of any controlled substance inventory for which the licensee has responsibility;

(6) knowingly prescribing, selling, giving away, or administering, directly or indirectly, or offering to prescribe, sell, furnish, give away, or administer any controlled substance to a drug dependent person, as defined in Subsection 58-37-2(1)(s), except for legitimate medical purposes as permitted by law;

(7) refusing to make available for inspection controlled substance stock, inventory, and records as required under this rule or other law regulating controlled substances and controlled substance records;

(8) failing to submit controlled substance prescription information to the database manager after being notified in writing to do so;

(9) failing to obtain a DEA registration within the time frame established in Section R156-37-305.

R156-37-601. Access to Records, Facilities, and Inventory.

Applicants for licensure and all licensees shall make available for inspection to any person authorized to conduct an administrative inspection pursuant to Title 58, Chapter 37, this rule or federal law, to the extent they exist, during regular business hours and at other reasonable times in the event of an emergency, their controlled substance stock or inventory, records required under the Utah Controlled Substances Act and this rule or under the federal controlled substance laws, and facilities related to activities involving controlled substances.

R156-37-602. Records.

(1) Records of purchase, distribution, dispensing, prescribing, and administration of controlled substances shall be kept according to state and federal law. Prescribing practitioners shall keep accurate records reflecting the examination, evaluation and treatment of all patients. Patient medical records shall accurately reflect the prescription or administration of controlled substances in the treatment of the patient, the purpose for which the controlled substance is utilized and information upon which the diagnosis is based. Practitioners shall keep records apart from patient records of each controlled substance purchased, and with respect to each controlled substance, its disposition, whether by administration or any other means, date of disposition, to whom given and the quantity given.

(2) Any licensee who experiences any shortage or theft of controlled substances shall immediately file the appropriate forms with the Drug Enforcement Administration, with a copy

to the Division directed to the attention of the Investigation Bureau. He shall also report the incident to the local law enforcement agency.

(3) All records required by federal and state laws or rules must be maintained by the licensee for a period of five years. If a licensee should sell or transfer ownership of his files in any way, those files shall be maintained separately from other records of the new owner.

(4) Prescription records may be maintained electronically so long as:

(a) the original of each prescription, including telephone prescriptions, is maintained in a physical file and contains all of the information required by federal and state law; and

(b) an automated data processing system is used for the storage and immediate retrieval of refill information for prescription orders for controlled substances in Schedule III and IV, in accordance with federal guidelines.

(5) All records relating to Schedule II controlled substances received, purchased, administered or dispensed by the practitioner shall be maintained separately from all other records of the pharmacy or practice.

(6) All records relating to Schedules III, IV and V controlled substances received, purchased, administered or dispensed by the practitioner shall be maintained separately from all other records of the pharmacy or practice.

R156-37-603. Restrictions Upon the Prescription, Dispensing and Administration of Controlled Substances.

(1) A practitioner may prescribe or administer the Schedule II controlled substance cocaine hydrochloride only as a topical anesthetic for mucous membranes in surgical situations in which it is properly indicated and as local anesthetic for the repair of facial and pediatric lacerations when the controlled substance is mixed and dispensed by a registered pharmacist in the proper formulation and dosage.

(2) A practitioner shall not prescribe or administer a controlled substance without taking into account the drug's potential for abuse, the possibility the drug may lead to dependence, the possibility the patient will obtain the drug for a nontherapeutic use or to distribute to others, and the possibility of an illicit market for the drug.

(3) In accordance with Subsection 58-37-6(7)(f)(v)(D), unless the prescriber determines there is a valid medical reason to allow an earlier dispensing date, the dispensing date of a second or third prescription shall be no less than 30 days from the dispensing date of the previous prescription, to allow for receipt of the subsequent prescription before the previous prescription runs out.

(4) If a practitioner fails to document his intentions relative to refills of controlled substances in Schedules III through V on a prescription form, it shall mean no refills are authorized. No refill is permitted on a prescription for a Schedule II controlled substance.

(5) Refills of controlled substance prescriptions shall be permitted for the period from the original date of the prescription as follows:

(a) Schedules III and IV for six months from the original date of the prescription; and

(b) Schedule V for one year from the original date of the prescription.

(6) No refill may be dispensed until such time has passed since the date of the last dispensing that 80% of the medication in the previous dispensing should have been consumed if taken according to the prescriber's instruction.

(7) No prescription for a controlled substance shall be issued or dispensed without specific instructions from the prescriber on how and when the drug is to be used.

(8) Refills after expiration of the original prescription term requires the issuance of a new prescription by the prescribing

practitioner.

(9) Each prescription for a controlled substance and the number of refills authorized shall be documented in the patient records by the prescribing practitioner.

(10) A practitioner shall not prescribe or administer a Schedule II controlled stimulant for any purpose except:

(a) the treatment of narcolepsy as confirmed by neurological evaluation;

(b) the treatment of abnormal behavioral syndrome, attention deficit disorder, hyperkinetic syndrome, or related disorders;

(c) the treatment of drug-induced brain dysfunction;

(d) the differential diagnostic psychiatric evaluation of depression;

(e) the treatment of depression shown to be refractory to other therapeutic modalities, including pharmacologic approaches, such as tricyclic antidepressants or MAO inhibitors;

(f) in the terminal stages of disease, as adjunctive therapy in the treatment of chronic severe pain or chronic severe pain accompanied by depression;

(g) the clinical investigation of the effects of the drugs, in which case the practitioner shall submit to the Division a written investigative protocol for its review and approval before the investigation has begun. The investigation shall be conducted in strict compliance with the investigative protocol, and the practitioner shall, within 60 days following the conclusion of the investigation, submit to the Division a written report detailing the findings and conclusions of the investigation; or

(h) in treatment of depression associated with medical illness after due consideration of other therapeutic modalities.

(11) A practitioner may prescribe, dispense or administer a Schedule II controlled stimulant when properly indicated for any purpose listed in Subsection (10), provided that all of the following conditions are met:

(a) before initiating treatment utilizing a Schedule II controlled stimulant, the practitioner obtains an appropriate history and physical examination, and rules out the existence of any recognized contraindications to the use of the controlled substance to be utilized;

(b) the practitioner shall not prescribe, dispense or administer any Schedule II controlled stimulant when he knows or has reason to believe that a recognized contraindication to its use exists;

(c) the practitioner shall not prescribe, dispense or administer any Schedule II controlled stimulant in the treatment of a patient who he knows or should know is pregnant; and

(d) the practitioner shall not initiate or shall discontinue prescribing, dispensing or administering all Schedule II controlled stimulants immediately upon ascertaining or having reason to believe that the patient has consumed or disposed of any controlled stimulant other than in compliance with the treating practitioner's directions.

R156-37-604. Prescribing of Controlled Substances for Weight Reduction or Control.

(1) A practitioner shall not prescribe, dispense or administer a Schedule II or Schedule III controlled substance for purposes of weight reduction or control.

(2) A prescribing practitioner may prescribe or administer a Schedule IV controlled substance in treating excessive weight leading to increased health risks only when all the following conditions are met:

(a) medication is used only as an adjunct to a comprehensive weight loss program based on supplemental weight loss activities including, but not limited to, changing lifestyle counseling, nutritional education, and a regular, individualized exercise regimen;

(b) prior to initiating treatment the prescribing practitioner shall:

(i) determine through thorough review of past medical records that the patient has made a substantial good-faith effort to lose weight in a comprehensive weight loss program without the use of controlled substances, and the previous regimen has not been effective;

(ii) obtain a complete history, perform a complete physical examination of the patient, and rule out the existence of any recognized contraindications to the use of the medication(s);

(iii) determine and document this assessment in the patient's medical record, that the health benefit to the patient greatly outweighs the possible risks of the medications prescribed; and

(iv) discuss with the patient the possible risks associated with the medication and have on record an informed consent which clearly documents that the long term effects of using controlled substances for weight loss or weight control are not known;

(c) throughout the prescribing period, the prescribing practitioner shall:

(i) supervise, oversee, and regularly monitor the patient, including his participation in supplemental weight loss activities, efficacy of the medication, and advisability of continuing to prescribe the weight loss or weight control medication; and

(ii) maintain a central medical record, containing at least, the goal of treatment or target weight, the ongoing progress toward that goal or maintenance of the weight loss, the patient's supplemental weight loss activities with documentation of compliance with the comprehensive weight loss program; and

(d) the prescribing practitioner shall immediately discontinue the weight loss medication in any of the following situations:

(i) the practitioner knows or should know that the patient is pregnant;

(ii) the patient has consumed or disposed of any controlled substance other than in compliance with the prescribing practitioner's directions;

(iii) the patient is abusing the controlled substance being prescribed for weight loss;

(iv) the patient develops a contraindication during the course of therapy; or

(v) the medication is not effective or that the patient is not abiding with and following through with the agreed upon comprehensive weight loss program.

R156-37-605. Emergency Verbal Prescription of Schedule II Controlled Substances.

(1) Prescribing practitioners may give a verbal prescription for a Schedule II controlled substance if:

(a) the quantity dispensed is only sufficient to cover the patient for the emergency period, not to exceed 72 hours;

(b) the prescribing practitioner has examined the patient within the past 30 days, the patient is under the continuing care of the prescribing practitioner for a chronic disease or ailment, or the prescribing practitioner is covering for another practitioner and has knowledge of the patient's condition; and

(c) a written prescription is delivered to the pharmacist within seven working days of the verbal order.

(2) A pharmacist may fill an emergency verbal or telephonic prescription from a prescribing practitioner for a Schedule II controlled substance if:

(a) the amount does not exceed a 72 hour supply; and

(b) the filling pharmacist reasonably believes that the prescribing practitioner is licensed to prescribe the controlled substances or makes a reasonable effort to determine that he is licensed.

R156-37-606. Disposal of Controlled Substances.

(1) Any disposal of controlled substances by licensees

shall be consistent with the provisions of 1307.21 of the Code of Federal Regulations.

(2) Records of disposal of controlled substances shall be maintained and made available on request to the Division or its agents for inspection for a period of five years.

R156-37-607. Surrender of Suspended or Revoked License.

(1) Licenses which have been restricted, suspended or revoked shall be surrendered to the Division within 30 days of the effective date of the order of restriction, suspension or revocation. Compliance with this section will be a consideration in evaluating applications for relicensing.

R156-37-608. Herbal Products.

The Division shall not apply the provisions of the Controlled Substance Act or this rule in restricting citizens or practitioners, regardless of their license status, from the sale or use of food or herbal products that are not scheduled as controlled substances by State or Federal law.

KEY: controlled substances, licensing

April 21, 2016

Notice of Continuation February 21, 2012

58-1-106(1)(a)

58-37-6(1)(a)

58-37f-301(1)

**R156. Commerce, Occupational and Professional Licensing.
R156-40. Recreational Therapy Practice Act Rule.
R156-40-101. Title.**

This rule is known as the "Recreational Therapy Practice Act Rule".

R156-40-102. Definitions.

In addition to the definitions in Title 58, Chapters 1 and 40, as used in Title 58, Chapters 1 and 40 or this rule:

(1) "Approved graduate degree", as used in Subsection 58-40-302(2)(a), means an earned graduate (Masters, Ed.D., or Ph.D.) degree in recreational therapy or a graduate degree with an approved emphasis in recreational therapy, which includes:

(a) a minimum of nine semester hours or 12 quarter hours of upper division or graduate level course work in therapeutic recreation and/or recreational therapy;

(b) a minimum of 18 semester hours or 24 quarter hours of supportive coursework as outlined by the January 2014 NCTRC Certification Standards, Part I, which are incorporated by reference; and

(c) an approved practicum that:

(i) includes field placement experience in recreational therapy services that:

(A) uses the therapeutic recreation process as defined in the January 2011 NCTRC National Job Analysis, which is incorporated by reference; and

(B) is under the supervision of an onsite field placement supervisor who:

(I) is licensed in Utah as a TRS or MTRS; and

(II) is nationally certified by NCTRC as a CTRS; and

(ii) if the practicum is conducted outside Utah, is verified on an official university transcript.

(2) "Approved emphasis, option, or concentration in therapeutic recreation or recreational therapy", as used in Subsection 58-40-302(3)(a)(ii), means an emphasis, option or concentration posted on the transcript that meets the January 2014 NCTRC Certification Standards, Part I, which are incorporated by reference, including:

(a) a minimum of 18 semester or 24 quarter hours of therapeutic recreation and general recreation content coursework with no less than a minimum of 12 semester or 16 quarter hours in therapeutic recreation, consisting of a minimum of four three-credit hour courses;

(b) a total of 18 semester or 24 quarter hours of support coursework with a minimum of:

(i) three semester hours or three quarter hours coursework in the content area of anatomy and physiology;

(ii) three semester hours or three quarter hours coursework in the content area of abnormal psychology; and

(iii) three semester hours or three quarter hours coursework in the content area of human growth and development across the lifespan. The remaining semester hours or quarter hours of coursework must be fulfilled in the content area of "human service" as defined by the NCTRC; and

(c) field placement experience in therapeutic recreation services that:

(i) uses the therapeutic recreation process as defined in the January 2011 NCTRC National Job Analysis, which is incorporated by reference;

(ii) is under the supervision of an academic supervisor and an onsite field placement supervisor, each of whom:

(A) is state licensed as a TRS or MTRS;

(B) is nationally certified by NCTRC as a CTRS; and

(C) meets the standards for field placement supervision; and

(iii) if the practicum is conducted outside Utah, is verified on an official university transcript.

(3) "Consultation", as used in Subsection 58-40-601(3)(a)(ii), is defined in Subsection R156-40-302f.

(4) "CTRS" means a person certified as a Certified Therapeutic Recreation Specialist by the NCTRC.

(5) "Full-time, on-site", as used in Subsections 58-40-601(3)(a) and (b), means an individual who is employed on the premises with the hiring agency for a minimum of 30 hours per week.

(6) "Maintain the ongoing documentation", as used in Subsection 58-40-601(3)(b), means:

(a) documenting the ongoing treatment or intervention provided to clients according to the treatment plan; and

(b) providing review of patient status according to federal, state, and agency regulations.

(7) "MTRS" means a person licensed as a master therapeutic recreation specialist.

(8) "NCTRC" means the National Council for Therapeutic Recreation Certification.

(9) "Supervision", as used in Section 58-40-601, means that a person who is employed full-time and on-site as a TRS or MTRS by a recreational therapy services provider is responsible to ensure that the supervised TRT implements the treatment plan as established by the supervisor.

(10) "Supervision of a temporary TRS", as used in Subsection R156-40-302f(1)(d), means that the TRS or MTRS supervisor:

(a) is responsible for the recreational therapy interventions performed by the temporary TRS; and

(b) will be required to review and approve the treatment plans as well as any modifications to the treatment plans as evidenced by the signature of the TRS or MTRS in the treatment plan.

(11) "TRS" means a person licensed as a therapeutic recreation specialist.

(12) "TRT" means a person licensed as a therapeutic recreation technician.

(13) "Written plan of operation", as used in Subsection 58-40-102(6)(b)(viii), means a comprehensive management plan that outlines recreational therapy services that, at a minimum, includes:

(a) vision and mission statement;

(b) policy and procedures;

(c) assessment protocol;

(d) treatment and/or intervention plan;

(e) scope of care; and

(f) personnel management.

(14) "Unprofessional conduct" is defined in Title 58, Chapters 1 and 40.

R156-40-103. Authority - Purpose.

This rule is adopted by the division under the authority of Subsection 58-1-106(1)(a) to enable the division to administer Title 58, Chapter 40.

R156-40-104. Organization - Relationship to Rule R156-1.

The organization of this rule and its relationship to Rule R156-1 is as described in Section R156-1-107.

R156-40-302a. Qualifications for Licensure - Education Requirements.

In accordance with Section 58-40-302, the educational requirements for licensure include:

(1) An MTRS applicant shall:

(a) complete an approved graduate degree as defined in R156-40-102(1);

(b) have a current NCTRC certification as a CTRS or a current license as a TRS; and

(c) document completion of the education and 4000 hours of paid experience while nationally certified as a CTRS or licensed as a TRS.

(2) A TRS applicant shall:

(a) have a current NCTRC certification as a CTRS; and
 (b) document completion of the education and practicum requirements for licensure as a TRS on an official university transcript.

(3) A TRT applicant shall:

(a) have an approved educational course in therapeutic recreation taught by an MTRS, as required by Subsection 58-40-302(4)(b)(i), which shall consist of 90 hours of structured education under the instruction and direction of a licensed MTRS, or if completed out of state, under the direction of a nationally certified CTRS, which includes:

(i) theories and concepts of recreational therapy;
 (ii) the therapeutic recreation process;
 (iii) characteristics of illness and disability and their effects on leisure;
 (iv) medical and psychiatric terminology including psychiatric, pharmacology, gerontology, and abbreviations;
 (v) ethics;
 (vi) role and function of other health and human service professionals, including: agencies, medical specialists and allied health professionals; and
 (vii) health and safety; and

(b) complete a two-hour pre-licensure course, as required by Subsection 58-40-302(4)(e), which shall meet the requirements of this Subsection.

(i) The course provider shall be one of the following:

(A) a recognized accredited college or university;
 (B) a county, state, or federal agency; or
 (C) a professional association, society or organization representing a licensed profession.

(ii) The content of the course shall be relevant to recreational therapy and include one or more of the following subject areas:

(A) suicide concepts and facts;
 (B) suicide risk assessment, crisis intervention, and first aid;
 (C) evidence-based intervention for suicide risk;
 (D) continuity of care and follow-up services for suicide risk; or
 (E) therapeutic alliances for intervention in suicide risk.

(iii) Each hour of education shall consist of 50 minutes of education in the form of classroom lectures and discussion, workshops, webinars, online self-paced modules, case study review, or simulations.

(iv) A course provider shall document and verify attendance and completion.

(v) An applicant for licensure is responsible for submitting evidence of course completion to the Division as a prerequisite for licensure.

R156-40-302b. Qualifications for Licensure - Experience Requirements.

In accordance with Section 58-40-302, the experience requirements for licensure include:

(1) An MTRS is required to complete 4000 hours of paid experience, as required by Subsection 58-40-302(2)(b), which means an individual must either work as a TRS in Utah in a paid position practicing recreational therapy or work outside of Utah as a CTRS in a paid position practicing recreational therapy.

(2) A TRS is required to complete an approved practicum, as required by Subsection 58-40-302(3)(b), which means a practicum verified on the degree transcript.

(3) A TRT is required to complete an approved practicum, as required by Subsection 58-40-302(4)(c), which means 125 hours of field work experience to be completed over a duration of not more than nine months under the direction of a licensed TRS or MTRS supervisor or consultant, that includes:

(a) a minimum of 20 hours of direct face to face supervision of programming, documentation and treatment

intervention by the TRS or MTRS supervisor or consultant;

(b) training in recreational therapy or therapeutic recreation process as defined in Subsection 58-40-102(5) and (6);

(c) interdisciplinary contact;
 (d) administration contact; and
 (e) community relations.

R156-40-302c. Qualifications for Licensure - Examination Requirements.

In accordance with Subsections 58-40-302(2)(c), (3)(c) and (4)(d), applicants for licensure shall pass the following examinations:

(1) Applicants for licensure as a TRS or MTRS shall pass the NCTRC certification examination as evidenced by a current NCTRC certification as an CTRS.

(2) Applicants for licensure as a TRT shall pass the Therapeutic Recreation Technician Theory Examination with a minimum score of 70%.

(3) Applicants for licensure as a TRT who fail the Therapeutic Recreation Technician Theory Examination three consecutive times must repeat the educational coursework.

R156-40-302d. Time Limitation for TRT applicants.

(1) In accordance with Subsection 58-40-302(4) and Sections R156-40-302a, R156-40-302b and R156-40-302c, a TRT applicant shall pass the examinations and apply for licensure after completion of the 125 practicum hours required under Subsection R156-40-302b(3) and must do so within the same nine month period referred to in that Subsection.

(2) A TRT applicant who does not complete the education, practicum and examinations within nine months is not eligible to be employed as a TRT in a therapeutic recreation department.

(3) A TRT student who does not seek licensure within two years after completion of the education course shall retake the education, practicum and pass the examination prior to applying for licensure.

R156-40-302e. Qualifications for Supervision.

"Supervision of a therapeutic recreation technician", as used in Subsection 58-40-601(3)(a)(i), means that the TRS or MTRS supervisor is employed full-time and onsite in the same hospital, clinic, or facility as the person being supervised and is responsible for:

(1) providing "general supervision" as defined by Subsection R156-1-102(4)(c);

(2) ensuring that recreation therapy services are provided according to the Recreational Therapy Practice Act, standards of the profession, administrative and governing regulations;

(3) providing training, clinical guidance and evaluation; and

(4) demonstrating, as evidenced by the signature of the TRS or MTRS in the patient chart, review and evaluation of ongoing documentation.

R156-40-302f. Qualifications for Consultation.

"Consultation of a therapeutic recreation technician", as used in Subsection 58-40-601(3)(a)(ii) means that the MTRS consultant, contracted by the agency is responsible for:

(1) providing "general supervision" as defined in Subsection R156-1-102(4)(c);

(2) performing the assessment as described in Subsection 58-40-102(2)(a)(ii);

(3) prescribing, creating or modifying the treatment or intervention plans to be performed by the TRT as determined by the assessment;

(4) observing, evaluating and documenting that the recreation therapy services are being conducted according to administrative and governing regulations;

(5) observing, evaluating and documenting adherence to the standards of practice of the recreational therapy profession; and

(6) demonstrating adherence, as evidenced by the signature of the MTRS in the patient chart, reviews and evaluation of ongoing regulatory documentation.

R156-40-302g. Qualifications for Temporary License as a TRS - Supervision Required.

(1) In accordance with Section 58-1-303, an applicant for temporary licensure as a TRS shall:

(a) submit an application for temporary license in the form prescribed by the division which includes a verification that the applicant has registered and been approved to take the next available NCTRC examination;

(b) pay a fee determined by the department under Section 63J-1-504;

(c) meet all the requirements for licensure, except passing the NCTRC examination; and

(d) practice recreational therapy under the supervision of a Utah licensed TRS or MTRS as defined in Subsection R156-40-102(8).

(2) The temporary license shall be issued for a period not to exceed 120 days to allow the applicant to pass the NCTRC examination.

(3) The temporary license will not be renewed or extended for any purpose.

R156-40-303. Renewal Cycle - Procedures.

(1) In accordance with Subsection 58-1-308(1), the renewal date for the two-year renewal cycle applicable to licenses under Title 58, Chapter 40 is established by rule in Section R156-1-308a(1).

(2) Renewal procedures shall be in accordance with Section R156-1-308c.

R156-40-304. Continuing Education.

In accordance with Section 58-40-304, qualified continuing education requirements are established as follows:

(1) All licensed MTRS, TRS, and TRT's shall complete 20 hours of qualified continuing education including two hours of suicide prevention training that meets the requirements of this section.

(2) Qualified continuing education hours for licensees who have not been licensed for the entire two-year period will be prorated from the date of licensure.

(3) Continuing education under this section shall:

(a) be relevant to the licensee's professional practice;

(b) be prepared and presented by individuals who are qualified by education, training and experience to provide recreational therapy continuing education; and

(c) have a method of verification of attendance and completion.

(4) The suicide prevention training shall include one or more of the following subject areas:

(a) suicide concepts and facts;

(b) suicide risk assessment, crisis intervention, and first aid;

(c) evidence-based intervention for suicide risk;

(d) continuity of care and follow-up services for suicide risk; or

(e) therapeutic alliances for intervention in suicide risk.

(5) Credit for continuing education shall be recognized in accordance with the following:

(a) unlimited hours shall be recognized for continuing education completed in blocks of time of not less than 50 minutes in formally established classroom courses, seminars, lectures, conferences or training sessions which meet the criteria listed in Subsection (3) above, and which are approved by,

conducted by, or under the sponsorship of:

(i) the Division of Occupational and Professional Licensing;

(ii) recognized universities and colleges; or

(iii) professional associations, societies and organizations representing a licensed profession whose program objectives relate to the practice of recreational therapy;

(b) a maximum of ten hours per two-year period may be recognized for teaching continuing education courses relevant to recreational therapy;

(c) a maximum of 12 hours per two-year period may be recognized for continuing education that is provided via the internet and/or webinar which provides a certificate of completion;

(d) a maximum of six hours per two-year period may be recognized for continuing education provided by the Division of Occupational and Professional Licensing;

(e) a maximum of four hours per two-year period may be recognized for CPR and first aid certification through a live course, not online; and

(f) a maximum of six hours per two-year period may be recognized for publications in an article, journal, newsletter or other professional publications.

(6) If properly documented that a licensee is subject to circumstances which prevent that licensee from meeting the continuing education requirements established under this section, the licensee may be excused from the requirement for a period of up to three years. However it is the responsibility of the licensee to document the reasons and justify why the requirement could not be met.

(7) A licensee shall be responsible for maintaining competent records of completed qualified continuing education for a period of six years and if requested, demonstrate the licensee meets requirements under this section.

R156-40-502. Unprofessional Conduct.

Unprofessional conduct includes:

(1) failing to establish and maintain professional boundaries with a patient or former patient;

(2) exploiting a current and/or former patient for personal gain;

(3) failing as a TRS/MTRS to ensure the student TRT completes the minimum required education and experience prior to working with patients;

(4) failing as a TRS/MTRS to ensure the student TRT is competent to provide recreational therapy services when signing the education and experience verification; and

(5) failing to abide by the provisions of the American Therapeutic Recreation Association (ATRA) Code of Ethics, November 2009, which is incorporated by reference.

KEY: licensing, recreational therapy, recreation therapy
December 22, 2015 **58-40-101**
Notice of Continuation April 26, 2016 **58-1-106(1)(a)**
58-1-202(1)(a)

**R156. Commerce, Occupational and Professional Licensing.
R156-55a. Utah Construction Trades Licensing Act Rule.
R156-55a-101. Title.**

This rule shall be known as the "Utah Construction Trades Licensing Act Rule".

R156-55a-102. Definitions.

In addition to the definitions in Title 58, Chapters 1 and 55, as defined or used in this rule:

(1) "Construction trades instructor", as used in Subsection 58-55-301(2)(p) is clarified to mean the education facility which is issued the license as a construction trades instructor. It does not mean individuals employed by the facility who may teach classes.

(2) "Construction trades instruction facility" means the facility which is granted the license as a construction trades instructor as specified in Subsection 58-55-301(2)(p) and as clarified in R156-55a-102(1).

(3) "Employee", as used in Subsections 58-55-102(12)(a) and 58-55-102(17), means a person providing labor services in the construction trades who works for a licensed contractor, or the substantial equivalent of a licensed contractor as determined by the Division, for compensation who has federal and state taxes withheld and workers' compensation and unemployment insurance provided by the person's employer.

(4) "Incidental", as used in Subsection 58-55-102(40), means work which:

(a) can be safely and competently performed by the specialty contractor; and

(b) arises from and is directly related to work performed in the licensed specialty classification and does not exceed 10 percent of the overall contract and does not include performance of any electrical or plumbing work unless specifically included in the specialty classification description under Subsection R156-55a-301(2).

(5) "Maintenance" means the repair, replacement and refinishing of any component of an existing structure; but, does not include alteration or modification to the existing weight-bearing structural components.

(6) "Mechanical", as used in Subsections 58-55-102(21) and 58-55-102(32), means the work which may be performed by a S350 HVAC Contractor under Section R156-55a-301.

(7) "Personal property" means, as it relates to Title 58, Chapter 56, factory built housing and modular construction, a structure which is titled by the Motor Vehicles Division, state of Utah, and taxed as personal property.

(8) "Qualifier", as used in Title 58, Chapter 55 and this rule, means the individual who demonstrates competence for a contractor or construction trades instruction facility license by passing the examinations, completing the experience requirements or holding the individual licenses that are prerequisite requirements to obtain the contractor or construction trades instruction facility license.

(9) "School" means a Utah school district, applied technology college, or accredited college.

(10) "Unprofessional conduct" defined in Title 58, Chapters 1 and 55, is further defined in accordance with Section 58-1-203 in Section R156-55a-501.

R156-55a-103. Authority.

This rule is adopted by the Division under the authority of Subsection 58-1-106(1)(a) to enable the Division to administer Title 58, Chapter 55.

R156-55a-104. Organization - Relationship to Rule R156-1.

The organization of this rule and its relationship to Rule R156-1 is as described in Section R156-1-107.

R156-55a-301. License Classifications - Scope of Practice.

(1) In accordance with Subsection 58-55-301(2), the classifications of licensure are listed and described in this section. The construction trades or specialty contractor classifications listed are those determined to significantly impact the public health, safety, and welfare. A person who is engaged in work which is included in the items listed in Subsections R156-55a-301(4) and (5) is exempt from licensure in accordance with Subsection 58-55-305(1)(i).

(2) Licenses shall be issued in the following primary classifications and subclassifications:

E100 - General Engineering Contractor. A General Engineering contractor is a contractor licensed to perform work as defined in Subsection 58-55-102(22).

B100 - General Building Contractor. A General Building contractor is a contractor licensed to perform work as defined in Subsection 58-55-102(21) and pursuant to Subsection 58-55-102(21)(b) is clarified as follows:

(a) The General Building Contractor scope of practice does not include activities described in this Subsection under specialty classification S202 - Solar Photovoltaic Contractor unless the work is performed under the immediate supervision of an employee who holds a current certificate issued by the North American Board of Certified Energy Practitioners.

(b) The General Building Contractor scope of practice does not include activities described in this Subsection under specialty classification S354-Radon Mitigation Contractor unless the work is performed under the immediate supervision of an employee who holds a current certificate issued by the National Radon Safety Board (NRSB) or the National Radon Proficiency Program (NEHA-NRPP).

B200 - Modular Unit Installation Contractor. Set up or installation of modular units as defined in Subsection 15A-1-302(8) and constructed in accordance with Section 15A-1-304. The scope of the work permitted under this classification includes construction of the permanent or temporary foundations, placement of the modular unit on a permanent or temporary foundation, securing the units together if required and securing the modular units to the foundations. Work excluded from this classification includes installation of factory built housing and connection of required utilities.

R100 - Residential and Small Commercial Contractor. A Residential and Small Commercial contractor is a contractor licensed to perform work as defined in Subsection 58-55-102(32) and pursuant to Subsection 58-55-102(32) is clarified as follows:

(a) The Residential and Small Commercial Contractor scope of practice does not include activities described in this Subsection under specialty classification S202 - Solar Photovoltaic Contractor unless the work is performed under the immediate supervision of an employee who holds a current certificate issued by the North American Board of Certified Energy Practitioners.

(b) The Residential and Small Commercial Contractor scope of practice does not include activities described in this Subsection under specialty classification S354-Radon Mitigation Contractor unless the work is performed under the immediate supervision of an employee who holds a current certificate issued by the National Radon Safety Board (NRSB) or the National Radon Proficiency Program (NEHA-NRPP).

R101 - Residential and Small Commercial Non Structural Remodeling and Repair. Remodeling and repair to any existing structure built for support, shelter and enclosure of persons, animals, chattels or movable property of any kind with the restriction that no change is made to the bearing portions of the existing structure, including footings, foundation and weight bearing walls; and the entire project is less than \$50,000 in total cost.

R200 - Factory Built Housing Contractor. Disconnection, setup, installation or removal of manufactured housing on a

temporary or permanent basis. The scope of the work permitted under this classification includes placement of the manufactured housing on a permanent or temporary foundation, securing the units together if required, securing the manufactured housing to the foundation, and connection of the utilities from the near proximity, such as a meter, to the manufactured housing unit and construction of foundations of less than four feet six inches in height. Work excluded from this classification includes site preparation or finishing, excavation of the ground in the area where a foundation is to be constructed, back filling and grading around the foundation, construction of foundations of more than four feet six inches in height and construction of utility services from the utility source to and including the meter or meters if required or if not required to the near proximity of the manufactured housing unit from which they are connected to the unit.

I101 - General Engineering Trades Instruction Facility. A General Engineering Trades Instruction Facility is a construction trades instruction facility authorized to teach the construction trades and is subject to the scope of practice defined in Subsection 58-55-102(22).

I102 - General Building Trades Instruction Facility. A General Building Trades Instruction Facility is a construction trades instruction facility authorized to teach the construction trades and is subject to the scope of practice defined in Subsections 58-55-102(21) or 58-55-102(32).

I103 - Electrical Trades Instruction Facility. An Electrical Trades Instruction Facility is a construction trades instruction facility authorized to teach the electrical trades and subject to the scope of practice defined in Subsection R156-55a-301(S200).

I104 - Plumbing Trades Instruction Facility. A Plumbing Trades Instruction Facility is a construction trades instruction facility authorized to teach the plumbing trades and subject to the scope of practice defined in Subsection R156-55a-301(S210).

I105 - Mechanical Trades Instruction Facility. A Mechanical Trades Instruction Facility is a construction trades instruction facility authorized to teach the mechanical trades and subject to the scope of practice defined in Subsection R156-55a-301(S350).

S200 - General Electrical Contractor. Fabrication, construction, and/or installation of generators, transformers, conduits, raceways, panels, switch gear, electrical wires, fixtures, appliances, or apparatus which utilizes electrical energy. The General Electrical Contractor scope of practice does not include activities described in this Subsection under specialty classification S354-Radon Mitigation Contractor unless the work is performed under the immediate supervision of an employee who holds a current certificate issued by the National Radon Safety Board (NRSB) or the National Radon Proficiency Program (NEHA-NRPP).

S201 - Residential Electrical Contractor. Fabrication, construction, and/or installation of services, disconnecting means, grounding devices, panels, conductors, load centers, lighting and plug circuits, appliances and fixtures in any residential unit, normally requiring non-metallic sheathed cable, including multiple units up to and including a four-plex, but excluding any work generally recognized in the industry as commercial or industrial.

S202 - Solar Photovoltaic Contractor. Fabrication, construction, installation, and replacement of photovoltaic cell panels and related components. Wiring, connections and wire methods as governed in the National Electrical Code and Subsection R156-55b-102(1) shall only be performed by an S200 General Electrical Contractor or S201 Residential Electrical Contractor. This classification is not required to install stand alone solar systems that do not tie into premises wiring or into the electrical utility, such as signage or street or

parking lighting.

A contractor who obtained this classification of licensure between January 1, 2009 and April 25, 2011 and who holds an active license may, in addition to the above, perform the following activities as part of the scope of practice under this subsection: fabrication, construction, installation, and repair of photovoltaic cell panels and related components including battery storage systems, distribution panels, switch gear, electrical wires, inverters, and other electrical apparatus for solar photovoltaic systems. Work excluded from this classification includes work on any alternating current system or system component.

S210 - General Plumbing Contractor. Fabrication and/or installation of material and fixtures to create and maintain sanitary conditions in buildings, by providing a permanent means for a supply of safe and pure water, a means for the timely and complete removal from the premises of all used or contaminated water, fluid and semi-fluid organic wastes and other impurities incidental to life and the occupation of such premises, and provision of a safe and adequate supply of gases for lighting, heating, and industrial purposes. Work permitted under this classification shall include the furnishing of materials, fixtures and labor to extend service from a building out to the main water, sewer or gas pipeline. The General Plumbing Contractor scope of practice does not include activities described in this Subsection under specialty classification S354-Radon Mitigation Contractor unless the work is performed under the immediate supervision of an employee who holds a current certificate issued by the National Radon Safety Board (NRSB) or the National Radon Proficiency Program (NEHA-NRPP).

S211 - Boiler Installation Contractor. Fabrication and/or installation of fire-tube and water-tube power boilers and hot water heating boilers, including all fittings and piping, valves, gauges, pumps, radiators, converters, fuel oil tanks, fuel lines, chimney flues, heat insulation and all other devices, apparatus, and equipment related thereto in a closed system not connected to the culinary water system. Notwithstanding the foregoing, where water delivery for the closed system is connected to the culinary water system and separated from the culinary water system by a backflow prevention device, a contractor licensed under this subsection may connect the closed system to the backflow prevention device, which must be installed by an actively licensed plumber.

S212 - Irrigation Sprinkling Contractor. Layout, fabrication, and/or installation of water distribution system for artificial watering or irrigation.

S213 - Industrial Piping Contractor. Fabrication and/or installation of pipes and piping for the conveyance or transmission of steam, gases, chemicals, and other substances including excavating, trenching, and back-filling related to such work. This classification includes the above work for geo thermal systems.

S214 - Water Conditioning Equipment Contractor. Fabrication and/or installation of water conditioning equipment and only such pipe and fittings as are necessary for connecting the water conditioning equipment to the water supply system within the premises.

S215 - Solar Thermal Systems Contractor. Construction, repair and/or installation of solar thermal systems up to the system shut off valve or where the system interfaces with any other plumbing system.

S216 - Residential Sewer Connection and Septic Tank Contractor. Construction of residential sewer lines including connection to the public sewer line, and excavation and grading related thereto. Excavation, installation and grading of residential septic tanks and their drainage.

S217 - Residential Plumbing Contractor. Fabrication and/or installation of material and fixtures to create and

maintain sanitary conditions in residential building, including multiple units up to and including a four-plex by providing a permanent means for a supply of safe and pure water, a means for the timely and complete removal from the premises of all used or contaminated water, fluid and semi-fluid organic wastes and other impurities incidental to life and the occupation of such premises, and provision of a safe and adequate supply of gases for lighting and heating purposes. Work permitted under this classification shall include the furnishing of materials, fixtures and labor to extend service from a residential building out to the main water, sewer or gas pipeline. Excluded is any new construction and service work generally recognized in the industry as commercial or industrial.

S220 - Carpentry Contractor. Fabrication for structural and finish purposes in a structure or building using wood, wood products, metal studs, vinyl materials, or other wood/plastic/metal composites as is by custom and usage accepted in the building industry as carpentry. Incidental work includes the installation of tub liners and wall systems.

S221 - Cabinet, Millwork and Countertop Installation Contractor. On-site construction and/or installation of milled wood products or countertops.

S222 - Overhead and Garage Door Contractor. The installation of overhead and garage doors and door openers.

S230 - Siding Contractor. Fabrication, construction, and/or installation of siding.

S231 - Raingutter Installation Contractor. On-site fabrication and/or installation of rain gutters and drains, roof flashings, gravel stops and metal ridges.

S240 - Glass and Glazing Contractor. Fabrication, construction, installation, and/or removal of all types and sizes of glass, mirrors, substitutes for glass, glass-holding members, frames, hardware, and other incidental related work.

S250 - Insulation Contractor. Installation of any insulating media in buildings and structures for the sole purpose of temperature control, sound control or fireproofing, but shall not include mechanical insulation of pipes, ducts or conduits.

S260 - General Concrete Contractor. Fabrication, construction, mixing, batching, and/or installation of concrete and related concrete products along with the placing and setting of screeds for pavement for flatwork, the construction of forms, placing and erection of steel bars for reinforcing and application of plaster and other cement-related products.

S261 - Concrete Form Setting and Shoring Contractor. Fabrication, construction, and/or installation of forms and shoring material; but, does not include the placement of concrete, finishing of concrete or embedded items such as metal reinforcement bars or mesh.

S262 - Gunnite and Pressure Grouting Contractor. Installation of a concrete product either injected or sprayed under pressure.

S263 - Cementitious Coating Systems Resurfacing and Sealing Contractor. Fabrication, construction, mixing, batching and installation of cementitious coating systems or sealants limited to the resurfacing or sealing of existing surfaces, including the preparation or patching of the surface to be covered or sealed.

S270 - General Drywall and Plastering Contractor. Fabrication, construction, and installation of drywall, gypsum, wallboard panels and assemblies. Preparation of drywall or plaster surfaces for suitable painting or finishing. Application to surfaces of coatings made of plaster, including the preparation of the surface and the provision of a base. This does not include applying stucco to lathe, plaster and other surfaces. Exempted is the plastering of foundations.

S272 - Ceiling Grid Systems, Ceiling Tile and Panel Systems Contractor. Fabrication and/or installation of wood, mineral, fiber, and other types of ceiling tile and panels and the grid systems required for placement.

S273 - Light-weight Metal and Non-bearing Wall Partitions Contractor. Fabrication and/or installation of light-weight metal and other non-bearing wall partitions.

S280 - General Roofing Contractor. Application and/or installation of asphalt, pitch, tar, felt, flax, shakes, shingles, roof tile, slate, and any other material or materials, or any combination of any thereof which use and custom has established as usable for, or which are now used as, water-proof, weatherproof, or watertight seal or membranes for roofs and surfaces; and roof conversion. Incidental work includes the installation of roof clamp ring to the roof drain.

S290 - General Masonry Contractor. Construction by cutting, and/or laying of all of the following brick, block, or forms: architectural, industrial, and refractory brick, all brick substitutes, clay and concrete blocks, terra-cotta, thin set or structural quarry tile, glazed structural tile, gypsum tile, glass block, clay tile, copings, natural stone, plastic refractories, and castables and any incidental works, including the installation of shower pans, as required in construction of the masonry work.

S291 - Stone Masonry Contractor. Construction using natural or artificial stone, either rough or cut and dressed, laid at random, with or without mortar. Incidental work includes the installation of shower pans.

S292 - Terrazzo Contractor. Construction by fabrication, grinding, and polishing of terrazzo by the setting of chips of marble, stone, or other material in an irregular pattern with the use of cement, polyester, epoxy or other common binders. Incidental work includes the installation of shower pans.

S293 - Marble, Tile and Ceramic Contractor. Preparation, fabrication, construction, and installation of artificial marble, burned clay tile, ceramic, encaustic, falence, quarry, semi-vitreous, and other tile, excluding hollow or structural partition tile. Incidental work includes the installation of shower pans.

S294 - Cultured Marble Contractor. Preparation, fabrication and installation of slab and sheet manmade synthetic products including cultured marble, onyx, granite, onice, corian, and corian type products. Incidental work includes the installation of shower pans.

S300 - General Painting Contractor. Preparation of surface and/or the application of all paints, varnishes, shellacs, stains, waxes and other coatings or pigments.

S310 - Excavation and Grading Contractor. Moving of the earth's surface or placing earthen materials on the earth's surface, by use of hand or power machinery and tools, including explosives, in any operation of cut, fill, excavation, grading, trenching, backfilling, or combination thereof as they are generally practiced in the construction trade.

S320 - Steel Erection Contractor. Construction by fabrication, placing, and tying or welding of steel reinforcing bars or erecting structural steel shapes, plates of any profile, perimeter or cross-section that are used to reinforce concrete or as structural members, including riveting, welding, and rigging.

S321 - Steel Reinforcing Contractor. Fabricating, placing, tying, or mechanically welding of reinforcing bars of any profile that are used to reinforce concrete buildings or structures.

S322 - Metal Building Erection Contractor. Erection of pre-fabricated metal structures including concrete foundation and footings, grading, and surface preparation.

S323 - Structural Stud Erection Contractor. Fabrication and installation of metal structural studs and bearing walls.

S330 - Landscaping Contractor.

(a) grading and preparing land for architectural, horticultural, or decorative treatment;

(b) arrangement, and planting of gardens, lawns, shrubs, vines, bushes, trees, or other decorative vegetation;

(c) construction of small decorative pools, tanks, fountains, hothouses, greenhouses, fences, walks, garden lighting of 50 volts or less, or sprinkler systems;

(d) construction of retaining walls except retaining walls

which are intended to hold vehicles, structures, equipment or other non natural fill materials within the area located within a 45 degree angle from the base of the retaining wall to the level of where the additional weight bearing vehicles, structures, equipment or other non natural fill materials are located; or

(e) patio areas except that:

(i) no decking designed to support humans or structures shall be included; and

(ii) no concrete work designed to support structures to be placed upon the patio shall be included.

(f) This classification does not include running electrical or gas lines to any appliance.

S340 - Sheet Metal Contractor. Layout, fabrication, and installation of air handling and ventilating systems. All architectural sheet metal such as cornices, marquees, metal soffits, gutters, flashings, and skylights and skydomes including both plastic and fiberglass.

S350 - HVAC Contractor. Fabrication and installation of complete warm air heating and air conditioning systems, and complete ventilating systems. The HVAC Contractor scope of practice does not include activities described in this Subsection under specialty classification S354-Radon Mitigation Contractor unless the work is performed under the immediate supervision of an employee who holds a current certificate issued by the National Radon Safety Board (NRSB) or the National Radon Proficiency Program (NEHA-NRPP).

S351 - Refrigerated Air Conditioning Contractor. Fabrication and installation of air conditioning ventilating systems to control air temperatures below 50 degrees.

S352 - Evaporative Cooling Contractor. Fabrication and installation of devices, machinery, and units to cool the air temperature employing evaporation of liquid.

S353 - Warm Air Heating Contractor. Layout, fabrication, and installation of such sheet metal, gas piping, and furnace equipment as necessary for a complete warm air heating and ventilating system.

S354 - Radon Mitigation Contractor. Layout, fabrication, and installation of a radon mitigation system. This classification does not include work on heat recovery ventilation or makeup air components which must be performed by an HVAC Contractor and does not include electrical wiring which must be performed by an Electrical Contractor.

S360 - Refrigeration Contractor. Construction and/or installation of refrigeration equipment including, but not limited to, built-in refrigerators, refrigerated rooms, insulated refrigerated spaces and equipment related thereto; but, the scope of permitted work does not include the installation of gas fuel or electric power services other than connection of electrical devices to a junction box provided for that device and electrical control circuitry not exceeding 50 volts.

S370 - Fire Suppression Systems Contractor. Layout, fabrication, and installation of fire protection systems using water, steam, gas, or chemicals. When a potable sanitary water supply system is used as the source of supply, connection to the water system must be accomplished by a licensed plumbing contractor. Excluded from this classification are persons engaged in the installation of fire suppression systems in hoods above cooking appliances.

S380 - Swimming Pool and Spa Contractor. On-site fabrication, construction and installation of swimming pools, prefabricated pools, spas, and tubs.

S390 - Sewer and Waste Water Pipeline Contractor. Construction of sewer lines, sewage disposal and sewage drain facilities including excavation and grading with respect thereto, and the construction of sewage disposal plants and appurtenances thereto.

S400 - Asphalt Paving Contractor. Construction of asphalt highways, roadways, driveways, parking lots or other asphalt surfaces, which will include but will not be limited to, asphalt

overlay, chip seal, fog seal and rejuvenation, micro surfacing, plant mix sealcoat, slurry seal, and the removal of asphalt surfaces by milling. Also included is the excavation, grading, compacting and laying of fill or base-related thereto. Also included in painting on asphalt surfaces including striping, directional and other types of symbols or words.

S410 - Pipeline and Conduit Contractor. Fabrication, construction, and installation of pipes, conduit or cables for the conveyance and transmission from one station to another of such products as water, steam, gases, chemicals, slurries, data or communications. Included are the excavation, cabling, horizontal boring, grading, and backfilling necessary for construction of the system.

S420 - General Fencing, Ornamental Iron and Guardrail Contractor. Fabrication, construction, and installation of fences, guardrails, handrails, and barriers.

S421 - Residential Fencing Contractor. Fabrication and installation of residential fencing up to and including a height of six feet.

S430 - Metal Firebox and Fuel Burning Stove Installer. Fabrication, construction, and installation of metal fireboxes, fireplaces, and wood or coal-burning stoves, including the installation of venting and exhaust systems, provided the individual performing the installation is RMGA certified.

S440 - Sign Installation Contractor. Installation of signs and graphic displays which require installation permits or permission as issued by state or local governmental jurisdictions. Signs and graphic displays shall include signs of all types, both lighted and unlighted, permanent highway marker signs, illuminated awnings, electronic message centers, sculptures or graphic representations including logos and trademarks intended to identify or advertise the user or his product, building trim or lighting with neon or decorative fixtures, or any other animated, moving or stationary device used for advertising or identification purposes. Signs and graphic displays must be fabricated, installed and erected in accordance with professionally engineered specifications and wiring in accordance with the National Electrical Code.

S441 - Non Electrical Outdoor Advertising Sign Contractor. Installation of signs and graphic displays which require installation permits or permission as issued by state and local governmental jurisdictions. Signs and graphics shall include outdoor advertising signs which do not have electrical lighting or other electrical requirements, and in accordance with professionally engineered specifications.

S450 - Mechanical Insulation Contractor. Fabrication, application and installation of insulation materials to pipes, ducts and conduits.

S460 - Wrecking and Demolition Contractor. The raising, cribbing, underpinning, moving, and removal of building and structures.

S470 - Petroleum Systems Contractor. Installation of above and below ground petroleum and petro-chemical storage tanks, piping, dispensing equipment, monitoring equipment and associated petroleum and petro-chemical equipment including excavation, backfilling, concrete and asphalt.

S480 - Piers and Foundations Contractor. The excavation, drilling, compacting, pumping, sealing and other work necessary to construct, alter or repair piers, piles, footings and foundations placed in the earth's subsurface to prevent structural settling and to provide an adequate capacity to sustain or transmit the structural load to the soil or rock below.

S490 - Wood Flooring Contractor. Installation of wood flooring including prefinished and unfinished material, sanding, staining and finishing of new and existing wood flooring. Underlayments, non-structural subfloors and other incidental related work.

S491 - Laminate Floor Installation Contractor. Installation of laminate floors including underlayments, non-structural

subfloors and other incidental related work, but does not include the installation of sold wood flooring.

S500 - Sports and Athletic Courts, Running Tracks, and Playground Installation Contractor. Installation of sports and athletic courts including but not limited to tennis courts, racquetball courts, handball courts, basketball courts, running tracks, playgrounds, or any combination. Includes nonstructural floor subsurfaces, nonstructural wall surfaces, perimeter walls and perimeter fencing. Includes the installation and attachment of equipment such as poles, basketball standards or other equipment.

S510 - Elevator Contractor. Erecting, constructing, installing, altering, servicing, repairing or maintaining an elevator.

S600 - General Stucco Contractor. Applying stucco to lathe, plaster and other surfaces.

S700 - Specialty License Contractor.

(a) A specialty license is a license that confines the scope of the allowable contracting work to a specialized area of construction which the Division grants on a case-by-case basis.

(b) When applying for a specialty license, an applicant, if requested, shall submit to the Division the following:

- (i) a detailed statement of the type and scope of contracting work that the applicant proposes to perform; and
- (ii) any brochures, catalogs, photographs, diagrams, or other material to further clarify the scope of the work that the applicant proposes to perform.

(c) A contractor issued a specialty license shall confine the contractor's activities to the field and scope of operations as outlined by the Division.

(3) The scope of practice for the following primary classifications includes the scope of practice stated in the descriptions for the following subclassifications:

TABLE I

Primary Classification	Included subclassifications
S200	S201, S202
S210	S211, S212, S213, S214, S215, S216, S217
S220	S221, S222
S230	S231
S260	S261, S262, S263
S270	S272, S273
S290	S291, S292, S293, S294
S320	S321, S322, S323
S350	S351, S352, S353, S354
S420	S421
S440	S441
S490	S491

(4) The following activities are determined to not significantly impact the public health, safety and welfare and therefore do not require a contractors license:

- (a) sandblasting;
- (b) pumping services;
- (c) tree stump or tree removal;
- (d) installation within a building of communication cables including phone and cable television;
- (e) installation of low voltage electrical as described in R156-55b-102(1);
- (f) construction of utility sheds, gazebos or other similar items which are personal property and not attached;
- (g) building and window washing, including power washing;
- (h) central vacuum systems installation;
- (i) concrete cutting;
- (j) interior decorating;
- (k) wall paper hanging;
- (l) drapery and blind installation;
- (m) welding on personal property which is not attached;
- (n) chimney sweepers other than repairing masonry;
- (o) carpet and vinyl floor installation;

- (p) artificial turf installation;
- (q) general cleanup of a construction site which does not include demolition or excavation; and

(r) work that would otherwise be limited to individuals holding the S260, S261, S262, S263, S290, S310, S330, S380, S420, S421 and S500 specialty classifications if the work is within the \$1,000 or \$3,000 labor and material limit as specified in the handyman exemption in Subsection 58-55-305(1)(h).

(5) The following activities are those determined to not significantly impact the public health, safety and welfare beyond the regulations by other agencies and therefore do not require a contractors license:

- (a) lead removal regulated by the Department of Environmental Quality;
- (b) asbestos removal regulated by the Department of Environmental Quality; and
- (c) fire alarm installation regulated by the Fire Marshal.

R156-55a-302a. Qualifications for Licensure - Examinations.

(1) In accordance with Subsection 58-55-302(1)(c), the qualifier for an applicant for licensure as a contractor or the qualifier for an applicant for licensure as a construction trades instruction facility shall pass the following examinations:

- (a) the Utah Contractor Business - Law Examination; and
- (b) an approved trade classification specific examination, where required in Subsection (2).

(2) An approved trade classification specific examination is required for the following contractor license classifications:

- E100 - General Engineering Contractor
- B100 - General Building Contractor
- B200 - Modular Unit Installation Contractor
- R100 - Residential and Small Commercial Contractor
- R101 - Residential and Small Commercial Non Structural Remodeling and Repair Contractor
- R200 - Factory Built Housing Contractor
- I101 - General Engineering Trades Instruction Facility
- I102 - General Building Trades Instruction Facility
- I105 - Mechanical Trades Instruction Facility
- S211 - Boiler Installation Contractor
- S212 - Irrigation Sprinkling Contractor
- S213 - Industrial Piping Contractor
- S215 - Solar Thermal Systems Contractor
- S216 - Residential Sewer Connection and Septic Tank Contractor

- S220 - Carpentry Contractor
- S222 - Overhead and Garage Door Contractor
- S230 - Siding Contractor
- S240 - Glass and Glazing Contractor
- S250 - Insulation Contractor
- S260 - General Concrete Contractor
- S270 - General Drywall and Plastering Contractor
- S280 - General Roofing Contractor
- S290 - General Masonry Contractor
- S293 - Marble, Tile and Ceramic Contractor
- S300 - General Painting Contractor
- S310 - Excavation and Grading Contractor
- S320 - Steel Erection Contractor
- S321 - Steel Reinforcing Contractor
- S330 - Landscaping Contractor
- S340 - Sheet Metal Contractor
- S350 - HVAC Contractor
- S351 - Refrigerated Air Conditioning Contractor
- S353 - Warm Air Heating Contractor
- S360 - Refrigeration Contractor
- S370 - Fire Suppression Systems Contractor
- S380 - Swimming Pool and Spa Contractor
- S390 - Sewer and Waste Water Pipeline Contractor
- S410 - Pipeline and Conduit Contractor

S440 - Sign Installation Contractor
 S450 - Mechanical Insulation Contractor
 S490 - Wood Flooring Contractor
 S600 - General Stucco Contractor

(3) The passing score for each examination is 70%.

(4) Qualifications to sit for examination.

(a) An applicant applying to take any examination specified in this Section must sign an affidavit verifying that an applicant has completed the experience required under Subsection R156-55a-302b.

(5) "Approved trade classification specific examination" means a trade classification specific examination:

(a) given, currently or in the past, by the Division's contractor examination provider; or

(b) given by another state if the Division has determined the examination to be substantially equivalent.

(6) An applicant for licensure who fails an examination may retake the failed examination as follows:

(a) no sooner than 30 days following any failure up to three failures; and

(b) no sooner than six months following any failure thereafter.

R156-55a-302b. Qualifications for Licensure - Experience Requirements.

In accordance with Subsection 58-55-302(1)(e)(ii), the minimum experience requirements are established as follows:

(1) Requirements for all license classifications:

(a) Unless otherwise provided in this rule, two years of experience shall be lawfully performed within the 10-year period preceding the date of application under the general supervision of a contractor, and shall be subject to the following:

(i) If the experience was completed in Utah, it shall be:

(A) completed while a W-2 employee of a licensed contractor; or

(B) completed while working as an owner of a licensed contractor, which has for all periods of experience claimed, employed a qualifier who performed the duties and served in the capacities specified in Subsection 58-55-304(4) and in Subsection R156-55a-304.

(ii) If the experience was completed outside of the state of Utah, it shall be:

(A) completed in compliance with the laws of the jurisdiction in which the experience is completed; and

(B) completed with supervision that is substantially equivalent to the supervision that is required in Utah.

(iii) Experience may be determined to be substantially equivalent if lawfully obtained in a setting which has supervision of qualified persons and an equivalent scope of work, such as performing construction activities in the military where licensure is not required.

(b) One year of work experience means 2000 hours.

(c) No more than 2000 hours of experience during any 12 month period may be claimed.

(d) Except as described in Subsection (2)b, experience obtained under the supervision of a construction trades instructor as a part of an educational program is not qualifying experience for a contractor's license.

(e) If the applicant's qualifying experience is outdated but has previously been approved in the state of Utah, a passing score on the trade examination and the laws and rules examination obtained within the one-year period preceding the date of application will requalify the applicant's experience.

(2) Requirements for E100 General Engineering, B100 General Building, R100 Residential and Small Commercial Building license classifications:

(a) One of the required two years of experience shall be in a supervisory or managerial position.

(b) A person holding a four year bachelors degree or a two year associates degree in Construction Management may have one year of experience credited towards the supervisory or managerial experience requirement.

(c) A person holding a Utah professional engineer license may be credited with satisfying one year toward the supervisory or managerial experience required for E100 contractor license.

(3) Requirements for I101 General Engineering Trades Instruction Facility, I102 General Building Trades Instruction Facility, I103 Electrical Trades Instruction Facility, I104 Plumbing Trades Instruction Facility, I105 Mechanical Trades Instruction Facility license classifications:

An applicant for construction trades instruction facility license shall have the same experience that is required for the license classifications for the construction trade they will instruct.

(4) Requirements for S202 Solar Photovoltaic Contractor. In addition to the requirements of Subsection (1), an applicant shall hold a current certificate by the North American Board of Certified Energy Practitioners.

(5) Requirements for S354 Radon Mitigation Contractor. In addition to the requirements of Subsection (1), an applicant shall hold a current certificate issued by the National Radon Safety Board (NRSB) or the National Radon Proficiency Program (NEHA-NRPP). Experience completed prior to the effective date of this rule does not need to be performed under the supervision of a licensed contractor. Experience completed after the effective date of this rule must be performed under the supervision of a licensed contractor who has authority to practice radon mitigation.

R156-55a-302c. Qualifications for Licensure Requiring Licensure in a Prerequisite Classification.

(1) Beginning at the effective date of this rule, each new applicant as a qualifier for licensure as a I103 Electrical Trades Instruction Facility shall also be licensed as a master electrician or a residential master electrician.

(2) Beginning at the effective date of this rule, each new applicant as a qualifier for licensure as a I104 Plumbing Trades Instruction Facility shall also be licensed as a master plumber or a residential master plumber.

R156-55a-302d. Qualifications for Licensure - Proof of Insurance and Registrations.

In accordance with the provisions of Subsection 58-55-302(2)(b), an applicant who is approved for licensure shall submit proof of public liability insurance which provides coverage for the scope of work performed and in coverage amounts of at least \$100,000 for each incident and \$300,000 in total by means of a certificate of insurance naming the Division as a certificate holder.

R156-55a-302e. Additional Requirements for Construction Trades Instructor Classifications.

In accordance with Subsection 58-55-302(1)(f), the following additional requirements for licensure are established:

(1) Any school that provides instruction to students by building houses for sale to the public is required to become a Utah licensed contractor with a B100 General Building Contractor or R100 Residential and Small Commercial Building Contractor classification or both.

(2) Any school that provides instruction to students by building houses for sale to the public is also required to be licensed in the appropriate instructor classification.

(a) Before being licensed in a construction trades instruction facility classification, the school shall submit the name of an individual person who acts as the qualifier in each of the construction trades instructor classifications in accordance with Section R156-55a-304. The applicant for

licensure as a construction trades instructor shall:

(i) provide evidence that the qualifier has passed the required examinations established in Section R156-55a-302a; and

(ii) provide evidence that the qualifier meets the experience requirement established in Subsection R156-55a-302b(3).

(3) Each individual employed by a school licensed as a construction trades instruction facility and working with students on a job site shall meet any teacher certification, or other teacher requirements imposed by the school district or college, and be qualified to teach the construction trades instruction facility classification as determined by the qualifier.

R156-55a-302f. Pre-licensure Education - Standards.

(1) Qualifier Education Requirement. The 20-hour pre-licensure education program required by Subsection 58-55-302(1)(e)(iii) shall be completed by the qualifier for a contractor applicant.

(2) Program Pre-Approval. A pre-licensure education provider shall submit an application for approval as a provider on the form provided by the Division. The applicant shall demonstrate compliance with Section R156-55a-302f.

(3) Eligible Providers. The following may be approved to provide pre-licensure education:

(a) a nationally or regionally recognized accredited college or university having a physical campus located within the State of Utah; or

(b) a non-profit Utah construction trades association involved in the construction trades in the State of Utah:

(i) representing multiple construction trade classifications;

(ii) with membership of:

(A) at least 250 contractors licensed in Utah; or

(B) less than 250 members, if the association is:

(I) competent, as determined by the Commission and the Director according to their sole discretion; and

(II) compliant with all other standards of this rule; and

(iii) having five years of experience providing education to contractors in Utah.

(4) Content. The 20-hour program shall include the following topics and hours of education relevant to the practice of the construction trades consistent with the laws and rules of this state:

(a) ten hours of financial responsibility instruction that includes the following:

(i) record keeping and financial statements;

(ii) payroll, including:

(A) payroll taxes;

(B) worker compensation insurance requirements;

(C) unemployment insurance requirements;

(D) professional employer organization (employee leasing) alternatives;

(E) prohibitions regarding paying employees on 1099 forms as independent contractors, unless licensed or exempted;

(F) employee benefits; and

(G) Fair Labor Standard Act;

(iii) cash flow;

(iv) insurance requirements including auto, liability, and health; and

(v) independent contractor licensure and exemption requirements;

(b) six hours of construction business practices that includes the following:

(i) estimating and bidding;

(ii) contracts;

(iii) project management;

(iv) subcontractors; and

(v) suppliers;

(c) two hours of regulatory requirements that includes the

following:

(i) licensing laws;

(ii) Occupational Safety and Health Administration (OSHA);

(iii) Environmental Protection Agency (EPA); and

(iv) consumer protection laws; and

(d) two hours of mechanic lien fundamentals that include the State Construction Registry.

(5) Program Schedule.

(a) A pre-licensure education provider shall offer programs at least 12 times per year.

(b) The pre-licensure education provider is not obligated to provide a course if the provider determines the enrollment is not sufficient to reach breakeven on cost.

(6) Program Instruction Requirements: The pre-licensure education shall meet the following standards:

(a) Time. Each hour of pre-licensure education credit shall consist of 60 minutes of education in the form of live lectures or training sessions. Time allowed for lunches or breaks may not be counted as part of the education time for which education credit is issued.

(b) Learning Objectives. The learning objectives of the pre-licensure education shall be reasonably and clearly stated.

(c) Teaching Methods. The pre-licensure education shall be presented in a competent and well organized manner consistent with the stated purpose and objective of the program. The student must demonstrate knowledge of the course material and must be given a pass/fail grade.

(d) Faculty. The pre-licensure education shall be prepared and presented by individuals who are qualified by education, training or experience.

(e) Distance Learning. Distance learning, internet courses, and home study courses are not allowed to meet pre-licensure education requirements.

(f) Registration and Attendance. The provider shall have a competent method of registration and verification of attendance of individuals who complete the pre-licensure education.

(g) Education Curriculum and Study/Resource Guide. The provider shall be responsible to provide or develop pre-licensure education curriculum and study/resource guide for the pre-licensure education that must be pre-approved by the Commission and the Division prior to use by the provider.

(h) Live Broadcast. The pre-licensure education course may be taught by live broadcast if:

(i) the student and the instructor are able to see and hear each other; and

(ii) a representative of the provider is at any remote location to monitor registration and attendance at the course.

(7) Certificates of Completion. The pre-licensure education provider shall provide individuals completing the pre-licensure education a certificate that contains the following information:

(a) the date of the pre-licensure education;

(b) the name of the pre-licensure education provider;

(c) the attendee's name;

(d) verification of completion of the 20-hour requirement; and

(e) the signature of the pre-licensure education provider.

(8) Reporting of Program Completion. A pre-licensure education provider shall, within seven calendar days, submit directly to the Division verification of attendance and completion on behalf of persons attending and completing the program. This verification shall be submitted on forms provided by the Division.

(9) Program Monitoring. On a random basis, the Division or Commission may assign monitors at no charge to attend a pre-licensure education course for the purpose of evaluating the education and the instructor(s).

(10) Documentation Retention. Each provider shall for a period of four years maintain adequate documentation as proof of compliance with this section and shall, upon request, make such documentation available for review by the Division or the Commission. Documentation shall include:

- (a) the dates of all pre-licensure education courses that have been completed;
- (b) registration and attendance logs of individuals who completed the pre-licensure education;
- (c) the name of instructors for each education course provided as a part of the program; and
- (d) pre-licensure education handouts and materials.

(11) Disciplinary Proceedings. As provided in Section 58-1-401 and Subsection 58-55-302(1)(e)(iii), the Division may refuse to renew or may revoke, suspend, restrict, place on probation, issue a public reprimand to, or otherwise act upon the approval of any pre-licensure education provider, if the pre-licensure education provider fails to meet any of the requirements of this section or the provider has engaged in other unlawful or unprofessional conduct.

(12) Exemptions. In accordance with Subsection 58-55-302(1)(e)(iii), the following persons are not required to complete the pre-licensure education program requirements:

- (a) a person holding a four-year bachelor degree or a two-year associate degree in Construction Management from an accredited program;
- (b) a person holding an active and unrestricted Utah professional engineer license who is applying for the E100 contractor license classification; or
- (c) a person who:
 - (i) is a qualifier on an active and unrestricted contractor license;
 - (ii) became the qualifier on the license on or before October 9, 2014; and
 - (iii) is applying to:
 - (A) add additional contractor classifications to the license; or
 - (B) become a qualifier on a new entity that is applying for initial licensure.

R156-55a-303a. Renewal Cycle - Procedures.

(1) In accordance with Subsection 58-1-308(1), the renewal date for the two year renewal cycle applicable to licensees under Title 58, Chapter 55 is established by rule in Section R156-1-308a(1).

(2) Renewal procedures shall be in accordance with Section R156-1-308c.

(3) In accordance with Subsections 58-55-501(21) and 58-1-308(3)(b)(i), there is established a continuing education requirement for license renewal. Each licensee, or the licensee's qualifier, or an officer, director or supervising individual, as designated by the licensee, shall comply with the continuing education requirements set forth in Section R156-55a-303b.

R156-55a-303b. Continuing Education - Standards.

(1) Required Hours. Pursuant to Subsection 58-55-302.5, each licensee shall complete a total of six hours of continuing education during each two year license term. A minimum of three hours shall be core education. The remaining three hours are to be professional education. Additional core education hours beyond the required amount may be substituted for professional education hours. A minimum of three hours shall consist of live in-class attendance. The remaining three hours may consist of courses provided through distance learning.

(a) "Core continuing education" is defined as construction codes, construction laws, job site safety, OSHA 10 or OSHA 30 safety training, governmental regulations pertaining to the construction trades and employee verification and payment practices, finance and bookkeeping.

(b) "Professional continuing education" is defined as substantive subjects dealing with the practice of the construction trades, including land development, land use, planning and zoning, energy conservation, professional development, arbitration practices, estimating, marketing techniques, servicing clients, personal and property protection for the licensee and the licensee's clients and similar topics.

(c) The following course subject matter is not acceptable as core education or professional education hours: mechanical office and business skills, such as typing, speed reading, memory improvement and report writing; physical well-being or personal development, such as personal and business motivation, stress management, time management, dress for success, or similar subjects; presentations by a supplier or a supplier representative to promote a particular product or line of products; and meetings held in conjunction with the general business of the licensee or employer.

(d) The Division may defer or waive the continuing education requirements as provided in Section R156-1-308d.

(2) A continuing education course shall meet the following standards:

(a) Time. Each hour of continuing education course credit shall consist of 50 minutes of education in the form of seminars, lectures, conferences, training sessions or distance learning modules. The remaining ten minutes is to allow for breaks.

(b) Provider. The course provider shall be among those specified in Subsection 58-55-302.5(2)(b).

(c) Content. The content of the course shall be relevant to the practice of the construction trades and consistent with the laws and rules of this state.

(d) Objectives. The learning objectives of the course shall be reasonably and clearly stated.

(e) Teaching Methods. The course shall be presented in a competent, well organized and sequential manner consistent with the stated purpose and objective of the program.

(f) Faculty. The course shall be prepared and presented by individuals who are qualified by education, training and experience.

(g) Distance learning. A course that is provided through Internet or home study may be recognized for continuing education if the course verifies registration and participation in the course by means of a test demonstrating that the participant has learned the material presented. Test questions shall be randomized for each participant. A home study course shall include no fewer than five variations of the final examination, distributed randomly to participants. Home study courses, including the five exam variations, shall be submitted in their entirety to the Division for review. Providers shall track the following:

- (i) the amount of time each student has spent in the course;
- (ii) what activities the student did or did not access; and
- (iii) all of the student's test scores.

(h) Documentation. The course provider shall have a competent method of registration of individuals who actually completed the course, shall maintain records of attendance that are available for review by the Division and shall provide individuals completing the course a certificate that contains the following information:

- (i) the date of the course;
- (ii) the name of the course provider;
- (iii) the name of the instructor;
- (iv) the course title;
- (v) the hours of continuing education credit and type of credit (core or professional);
- (vi) the attendee's name; and
- (v) the signature of the course provider.

(3) On a random basis, the Division may assign monitors at no charge to attend a course for the purpose of evaluating the course and the instructor.

(4) Each licensee shall maintain adequate documentation as proof of compliance with this section, such as certificates of completion, course handouts and materials. The licensee shall retain this proof for a period of three years from the end of the renewal period for which the continuing education is due. Each licensee shall assure that the course provider has submitted the verification of attendance to the continuing education registry on behalf of the licensee as specified in Subsection (8). Alternatively, the licensee may submit the course for approval and pay any course approval fees and attendance recording fees.

(5) Licensees who lecture in continuing education courses meeting these requirements shall receive two hours of continuing education for each hour spent lecturing. However, no lecturing or teaching credit is available for participation in a panel discussion.

(6) The continuing education requirement for electricians, plumbers and elevator mechanics as established in Subsections 58-55-302.7, if offered by a provider specified in Subsection 58-55-302.5(2)(b), shall satisfy the continuing education requirement for contractors as established in Subsection 58-55-302.5 and implemented herein. The contractor licensee shall assure that the course provider has submitted the verification of the electrician's, plumber's or elevator mechanic's attendance on behalf of the licensee to the continuing education registry as specified in Subsection (8).

(7) A course provider shall submit continuing education courses to the continuing education registry and shall submit verification of attendance and completion on behalf of licensees attending and completing the program directly to the continuing education registry in the format required by the continuing education registry.

(8) The Division shall review continuing education courses which have been submitted through the continuing education registry and approve only those courses which meet the standards set forth under this Section.

(9) As provided in Section 58-1-401 and Subsections 58-55-302.5(2) and 58-55-302.7(4)(a), the Division may refuse to renew or may revoke, suspend, restrict, place on probation, issue a public reprimand to, or otherwise act upon the approval of any course or provider, if the course or provider fails to meet any of the requirements of this section or the provider has engaged in unlawful or unprofessional conduct.

(10) Continuing Education Registry.

(a) The Division shall designate an entity to act as the Continuing Education Registry under this rule.

(b) The Continuing Education Registry, in consultation with the Division and the Commission, shall:

(i) through its internet site electronically receive applications from continuing education course providers and shall submit the application for course approval to the Division for review and approval of only those programs that meet the standards set forth under this Section;

(ii) publish on their website listings of continuing education programs that have been approved by the Division, and which meet the standards for continuing education credit under this rule;

(iii) maintain accurate records of qualified continuing education approved;

(iv) maintain accurate records of verification of attendance and completion, by individual licensee, which the licensee may review for compliance with this rule; and

(v) make records of approved continuing education programs and attendance and completion available for audit by representatives of the Division.

(c) Fees. A continuing education registry may charge a reasonable fee to continuing education providers or licensees for services provided for review and approval of continuing education programs.

R156-55a-304. Contractor License Qualifiers.

(1) The capacity and material authority specified in Subsection 58-55-304(4) is clarified as follows:

(a) Except as allowed in Subsection (b), the qualifier must receive remuneration for work performed for the contractor licensee for not less than 10 hours of work per week;

(i) If the qualifier is an owner of the business, the remuneration may be in the form of owner's profit distributions or dividends with a minimum ownership of 20 percent of the contractor licensee.

(ii) If the qualifier is an officer or manager of the contractor licensee, the remuneration must be in the form of W-2 wages.

(b) The 10 hour minimum in Subsection (a) may be reduced if the total of all hours worked by all owners and employees is less than 50 hours per week, in which case the minimum may not be less than 20 percent of the total hours of work performed by all owners and employees of the contractor.

(2) Construction Trades Instruction Facility Qualifier. In accordance with Subsection 58-55-302(1)(f), the contractor license qualifier requirements in Section 58-55-304 shall also apply to construction trades instruction facilities.

R156-55a-305. Compliance Agency Reporting of Sole Owner Building Permits Issued.

In accordance with Subsection 58-55-305(2), all compliance agencies that issue building permits to sole owners of property must submit information concerning each building permit issued in their jurisdiction within 30 days of the issuance, with the building permit number, date issued, name, address and phone number of the issuing compliance agency, sole owner's full name, home address, phone number, and subdivision and lot number of the building site, to a fax number, email address or written mailing address designated by the Division.

R156-55a-305a. Exempt Contractors Filing Affirmation of Liability and Workers Compensation Insurance.

(1) Initial affirmation. In accordance with Subsection 58-55-305(1)(h)(ii)(F), any person claiming exemption under Subsection 58-55-305(1)(h) for projects with a value greater than \$1,000 but less than \$3,000 shall file a registration of exemption with the Division which includes:

(a) the identity and address of the person claiming the exemption; and

(b) a statement signed by the registrant verifying:

(i) that the person has public liability insurance in force which includes the Division being named as a certificate holder, the policy number, the expiration date of the policy, the insurance company name and contact information, and coverage amounts of at least \$100,000 for each incident and \$300,000 in total; and

(ii) that the person has workers compensation insurance in force which names the Division as a certificate holder, includes the policy number, the expiration date of the policy, the insurance company name and contact information; or

(iii) that the person does not hire employees and is therefore exempt from the requirement to have workers compensation insurance.

(2) Periodic reaffirmations required. The affirmation required under Subsection (1) shall be reaffirmed on or before November 30 of each odd numbered year.

R156-55a-306. Contractor Financial Responsibility - Division Audit.

In accordance with Subsections 58-55-302(10)(c), 58-55-306(5), 58-55-306(4)(b), and 58-55-102(19), the Division may consider various factors in conducting a financial responsibility audit of an applicant, licensee, or any owner, including:

(1)(a) judgments, tax liens, collection actions, bankruptcy schedules and a history of late payments to creditors, including documentation showing the resolution of each of the above actions;

(b) financial statements and tax returns, including the ability to prepare or have prepared competent and current financial statements and tax returns;

(c) an acceptable current credit report that meets the following requirements:

(i) for individuals:

(A) a credit report from each of the three national reporting agencies, Trans Union, Experian, and Equifax; or

(B) a merged credit report of the agencies identified in Subsection (A) prepared by the National Association of Credit Managers (NACM); or

(ii) for entities, a business credit report such as an Experian Business Credit Report or a Dun and Bradstreet Report;

(d) an explanation of the reasons for any financial difficulties and how the financial difficulties were resolved;

(e) any of the factors listed in Subsection R156-1-302 that may relate to failure to maintain financial responsibility;

(f) each of the factors listed in this Subsection regarding the financial history of the owners of the applicant or licensee;

(g) any guaranty agreements provided for the applicant or licensee and any owners; and

(h) any history of prior entities owned or operated by the applicant, the licensee, or any owner that have failed to maintain financial responsibility.

R156-55a-308a. Operating Standards for Schools or Colleges Licensed as Contractors.

(1) Each school licensed as a B100 General Building Contractor or a R100 Residential and Small Commercial Contractor or both shall obtain all required building permits for homes built for resale to the public as part of an educational training program.

(2) Each employee that works as a teacher for a school licensed as a construction trades instruction facility shall:

(a) have on their person a school photo ID card with the trade they are authorized to teach printed on the card; and

(b) if instructing in the plumbing or electrical trades, they shall also carry on their person their Utah journeyman or residential journeyman plumber license or Utah journeyman, residential journeyman, master, or residential master electrician license.

(3) Each school licensed as a construction trades instruction facility shall not allow any teacher or student to work on any portion of the project subcontracted to a licensed contractor unless the teacher or student are lawful employees of the subcontractor.

R156-55a-308b. Natural Gas Technician Certification.

(1) In accordance with Subsection 58-55-308(1), the scope of practice defined in Subsection 58-55-308(2)(a) requiring certification is further defined as the installation, modifications, maintenance, cleaning, repair or replacement of the gas piping, combustion air vents, exhaust venting system or derating of gas input for altitude of a residential or commercial gas appliance.

(2) An approved training program shall include the following course content:

(a) general gas appliance installation codes;

(b) venting requirements;

(c) combustion air requirements;

(d) gas line sizing codes;

(e) gas line approved materials requirements;

(f) gas line installation codes; and

(g) methods of derating gas appliances for elevation.

(3) In accordance with Subsection 58-55-308(2)(c)(i), the

following programs are approved to provide natural gas technician training, and to issue certificates or documentation of exemption from certification:

(a) Federal Bureau of Apprenticeship Training;

(b) Utah college apprenticeship program; and

(c) Trade union apprenticeship program.

(4) In accordance with Subsection 58-55-308(3), the approved programs set forth in paragraphs (2)(b) and (2)(c) herein shall require program participants to pass the Rocky Mountain Gas Association Gas Appliance Installers Certification Exam or approved equivalent exams established or adopted by a training program, with a minimum passing score of 80%.

(5) In accordance with Subsection 58-55-308(3), a person who has not completed an approved training program, but has passed the Rocky Mountain Gas Association Gas Exam or approved equivalent exam established or adopted by an approved training program, with a minimum passing score of 80%, or the Utah licensed Journeyman or Residential Journeyman Plumber Exam, with a minimum passing score of 70%, shall be exempt from the certification requirement set forth in Subsection 58-55-308(2)(c)(i).

(6) Content of certificates of completion. An approved program shall issue a certificate, including a wallet certificate, to persons who successfully complete their training program containing the following information:

(a) name of the program provider;

(b) name of the approved program;

(c) name of the certificate holder;

(d) the date the certification was completed; and

(e) signature of an authorized representative of the program provider.

(7) Documentation of exemption from certification. The following shall constitute documentation of exemption from certification:

(a) certification of completion of training issued by the Federal Bureau of Apprenticeship Training;

(b) current Utah licensed Journeyman or Residential Journeyman plumber license; or

(c) certification from the Rocky Mountain Gas Association or approved equivalent exam which shall include the following:

(i) name of the association, school, union, or other organization who administered the exam;

(ii) name of the person who passed the exam;

(iii) name of the exam;

(iv) the date the exam was passed; and

(v) signature of an authorized representative of the test administrator.

(8) Each person engaged in the scope of practice defined in Subsection 58-55-308(2)(a) and as further defined in Subsection (1) herein, shall carry in their possession documentation of certification or exemption.

R156-55a-309. Reinstatement Application Fee.

The application fee for a contractor applicant who is applying for reinstatement more than two years after the expiration of licensure, who has been engaged in unauthorized practice of contracting following the expiration of the applicant's license, shall be the current license application fee normally required for a new application rather than the reinstatement fee provided under R156-1-308g(3)(d).

R156-55a-311. Reorganization - Conversion of Contractor Business Entity.

A reorganization of the business organization or entity under which a licensed contractor is licensed shall require application for a new license under the new form of organization or business structure. The creation of a new legal entity constitutes a reorganization and includes a change to a

new entity under the same form of business entity or a change of the form of business entity between proprietorship, partnership, whether limited or general, joint venture, corporation or any other business form.

Exception: A conversion from one form of entity to another form where "Articles of Conversion" are filed with the Utah Division of Corporations and Commercial Code shall not require a new contractor application.

R156-55a-312. Inactive License.

(1) The requirements for inactive licensure specified in Subsection R156-1-305(3) shall also include certification that the licensee will not engage in the construction trade(s) for which his license was issued while his license is on inactive status except to identify himself as an inactive licensee.

(2) A license on inactive status will not be required to meet the requirements of licensure in Subsections 58-55-302(1)(e)(i), 58-55-302(2)(a) and 58-55-302(2)(b).

(3) The requirements for reactivation of an inactive license specified in Subsection R156-1-305(6) shall also include:

(a) documentation that the licensee meets the requirements of Subsections 58-55-302(1)(e)(i), 58-55-302(2)(a) and 58-55-302(2)(b); and

(b) documentation that the licensee has taken and passed the business and law examination and the trade examination for the classification for which activation is sought except that the following exceptions shall apply to the reactivation examination requirement:

(i) No license shall be in an inactive status for more than six years.

(ii) Prior to a license being activated, a licensee shall meet the requirements of renewal.

R156-55a-401. Minimum Penalty for Failure to Maintain Insurance.

(1) A minimum penalty is hereby established for the violation of Subsection R156-55a-501(2) as follows:

(a) For a violation the duration of which is less than 90 days, where the licensee at the time a penalty is imposed documents that the required liability and workers compensation insurance have been reacquired, and provided an insurable loss has not occurred while not insured, a minimum of a 30 day suspension of licensure, stayed indefinitely, automatically executable in addition to any other sanction imposed, upon any subsequent violations of Subsection R156-55a-501(2).

(b) For a violation the duration of which is 90 days or longer, or where insurable loss has occurred, where the licensee at the time a penalty is imposed documents that the required insurance have been reacquired, a minimum of 30 days suspension of licensure.

(c) For a violation of any duration, where the licensee at the time a penalty is imposed fails to document that the required insurance have been reacquired, a minimum of indefinite suspension. A license which is placed on indefinite suspension may not be reinstated any earlier than 30 days after the licensee documents the required insurance have been reacquired.

(d) If insurable loss has occurred and licensee has not paid the damages, the license may be suspended indefinitely until such loss is paid by the licensee.

(e) Nothing in this section shall be construed to restrict a presiding officer from imposing more than the minimum penalty for a violation of Subsection R156-55a-501(2) and (3). However, absent extraordinary cause, the presiding officer may not impose less than the minimum penalty.

R156-55a-501. Unprofessional Conduct.

"Unprofessional conduct" includes:

(1) failing to notify the Division with respect to any matter for which notification is required under this rule or Title 58,

Chapter 55, the Construction Trades Licensing Act, including a change in qualifier. Such failure shall be considered by the Division and the Commission as grounds for immediate suspension of the contractors license;

(2) failing to continuously maintain insurance and registration as required by Subsection 58-55-302(2) and Section R156-55a-302d; and

(3) failing to within 30 days of a request from the Division to provide:

(a) proof of insurance coverage;

(b) a copy of the licensee's public insurance policy; or

(c) any exclusions included in the licensee's public insurance policy.

R156-55a-502. Penalty for Unlawful Conduct.

The penalty for violating Subsection 58-55-501(1) while suspended from licensure shall include the maximum fine allowed by Subsection 58-55-503(4)(i).

R156-55a-503. Administrative Penalties.

(1) In accordance with Subsection 58-55-503, the following fine schedule shall apply to citations issued under Title 58, Chapter 55:

TABLE II
FINE SCHEDULE
FIRST OFFENSE

Violation	All Licenses Except Electrical or Plumbing	Electrical or Plumbing
58-55-308(2)	\$ 500.00	N/A
58-55-501(1)	\$ 500.00	\$ 500.00
58-55-501(2)	\$ 500.00	\$ 800.00
58-55-501(3)	\$ 800.00	\$1,000.00
58-55-501(9)	\$ 500.00	\$ 500.00
58-55-501(10)	\$ 800.00	\$1,000.00
58-55-501(12)	N/A	\$ 500.00
58-55-501(14)	\$ 500.00	N/A
58-55-501(19)	\$ 500.00	N/A
58-55-501(21)	\$ 500.00	\$ 500.00
58-55-501(22)	\$ 500.00	N/A
58-55-501(23)	\$ 500.00	N/A
58-55-501(24)	\$ 500.00	N/A
58-55-501(25)	\$ 500.00	N/A
58-55-501(26)	\$ 500.00	N/A
58-55-501(27)	\$ 500.00	N/A
58-55-501(28)	\$ 500.00	N/A
58-55-501(29)	\$ 500.00	N/A
58-55-504(2)	\$ 500.00	N/A

SECOND OFFENSE

58-55-308(2)	\$1,000.00	N/A
58-55-501(1)	\$1,000.00	\$1,500.00
58-55-501(2)	\$1,000.00	\$1,500.00
58-55-501(3)	\$1,600.00	\$2,000.00
58-55-501(9)	\$1,000.00	\$1,000.00
58-55-501(10)	\$1,600.00	\$2,000.00
58-55-501(12)	N/A	\$1,000.00
58-55-501(14)	\$1,000.00	N/A
58-55-501(19)	\$1,000.00	N/A
58-55-501(21)	\$1,000.00	\$1,000.00
58-55-501(22)	\$1,000.00	N/A
58-55-501(23)	\$1,000.00	N/A
58-55-501(24)	\$1,000.00	N/A
58-55-501(25)	\$1,000.00	N/A
58-55-501(26)	\$1,000.00	N/A
58-55-501(27)	\$1,000.00	N/A
58-55-501(28)	\$1,000.00	N/A
58-55-501(29)	\$1,000.00	N/A
58-55-504(2)	\$1,000.00	N/A

THIRD OFFENSE

Double the amount for a second offense with a maximum amount not to exceed the maximum fine allowed under Subsection 58-55-503(4)(h).

(2) Citations shall not be issued for third offenses, except

in extraordinary circumstances approved by the investigative supervisor.

(3) If multiple offenses are cited on the same citation, the fine shall be determined by evaluating the most serious offense.

(4) An investigative supervisor may authorize a deviation from the fine schedule based upon the aggravating or mitigating circumstances.

(5) The presiding officer for a contested citation shall have the discretion, after a review of the aggravating and mitigating circumstances, to increase or decrease the fine amount imposed by an investigator based upon the evidence presented.

R156-55a-504. Crane Operator Certifications.

In accordance with Subsection 58-55-504(2)(a) one of the following certifications is required to operate a crane on commercial construction projects:

(1) a certification issued by the National Commission for the Certification of Crane Operators;

(2) a certification issued by the Operating Engineers Certification Program formerly known as the Southern California Crane and Hoisting Certification Program; or

(3) a certification issued by the Crane Institute of America.

R156-55a-602. Contractor License Bonds.

Pursuant to the provisions of Subsections 58-55-306(1)(b) and 58-55-306(5)(b)(iii), a contractor shall provide a license bond issued by a surety acceptable to the Division in the amount, form, and coverage as follows:

(1) An acceptable surety is one that is listed in the Department of Treasury, Fiscal Service, Circular 570, entitled "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" at the date of the bond.

(2) The coverage of the license bond shall include losses that may occur as the result of the contractor's violation of the unprofessional or unlawful provisions contained in Title 58, Chapters 1 and 55 and rules R156-1 and R156-55a including the failure to maintain financial responsibility, the failure of the licensee to pay its obligations, and the failure of the owners or a licensed unincorporated entity to pay income taxes or self employment taxes on the gross distributions from the unincorporated entity to its owners.

(3) The financial history of the applicant, licensee, or any owner, as outlined in Section R156-55a-306, may be reviewed in determining the bond amount required under this section.

(4) If the licensee is submitting a bond under Subsection 58-55-306(5)(b)(iii)(B), the amount of the bond shall be 20% of the annual gross distributions from the unincorporated entity to its owners. As provided in Subsection 58-55-302(10)(c), the Division, in determining if financial responsibility has been demonstrated, may consider the total number of owners, including new owners added as reported under the provisions of Subsection 58-55-302(10)(a)(i), in setting the amount of the bond required under this subsection.

(5) If the licensee is submitting a bond under any subsection other than Subsection 58-55-306(5)(b)(iii)(B), the minimum amount of the bond shall be \$50,000 for the E100 or B100 classification of licensure; \$25,000 for the R100 classification of licensure; or \$15,000 for other classifications. A higher amount may be determined by the Division and the Commission as provided in Subsection R156-55a-602(6).

(6) The amount of the bond specified under Subsection R156-55a-602(5) may be increased by an amount determined by the Commission and Division when the financial history of the applicant, licensee or any owner indicates the bond amount specified in Subsection R156-55a-602(1) is insufficient to reasonably cover risks to the public health, safety and welfare. The financial history of the applicant, licensee or any owner, as outlined in Section R156-55a-306 may be reviewed in

determining the bond amount required.

(7) A contractor may provide a license bond issued by a surety acceptable to the Division in an amount less than the bond amount specified in Subsection R156-55a-602(5) if:

(a) the contractor demonstrates by clear and convincing evidence that:

(i) the financial history of the applicant, licensee or any owner indicates the bond amount specified in Subsection R156-55a-602(1) is in excess of what is reasonably necessary to cover risks to the public health, safety and welfare;

(ii) the contractor's lack of financial responsibility is due to extraordinary circumstances that the contractor could not control as opposed to general financial challenges that all contractors experience; and

(iii) the contractor's scope of practice will be restricted commensurate with the degree of risk the contract presents to the public health, safety, and welfare; and

(b) the Commission and Division approve the amount.

KEY: contractors, occupational licensing, licensing

April 21, 2016 58-1-106(1)(a)

Notice of Continuation October 4, 2011 58-1-202(1)(a)

58-55-101

58-55-308(1)(a)

58-55-102(39)(a)

R156. Commerce, Occupational and Professional Licensing.**R156-57. Respiratory Care Practices Act Rule.****R156-57-101. Title.**

This rule is known as the "Respiratory Care Practices Act Rule".

R156-57-102. Definitions.

In addition to the definitions in Title 58, Chapters 1 and 57, as used in Title 58, Chapters 1 and 57, or this rule:

(1) "Other respiratory related durable medical equipment intended for use in the home", as used in Subsection 58-57-2(6)(k), means other new respiratory care technology intended for use in the home that was not approved on the market as of September 2006.

(2) "Supervised" as used in Subsection 58-1-307(1)(b) or "supervising" as used in Subsection 58-57-2(4)(e) means that the licensed respiratory care practitioner is present in the facility and shall be available to see the patient and give immediate consultation with respect to care.

R156-57-103. Authority - Purpose.

This rule is adopted by the division under the authority of Subsection 58-1-106(1)(a) to enable the division to administer Title 58, Chapter 57.

R156-57-104. Organization - Relationship to Rule R156-1.

The organization of this rule and its relationship to Rule R156-1 is as described in Section 58-1-107.

R156-57-302a. Qualifications for Licensure - Examination Requirements.

In accordance with Subsection 58-57-4(2)(f) and Sections 58-57-5 and 58-1-309, all applicants for licensure shall pass the following examinations:

(1) the National Board for Respiratory Care (NBRC) Certification Examination for Entry Level Respiratory Therapists (CRT); or

(2) the NBRC Registry Examination for Advanced Respiratory Therapists (RRT).

R156-57-302b. Qualifications for Licensure - Education Requirements.

In accordance with Subsection 58-57-4(2)(e) and Section 58-57-5, "a respiratory care practitioner education program that is approved by the board" means a respiratory care educational program accredited by the Committee on Accreditation for Respiratory Care (COARC) as evidenced by NBRC certification as a CRT or RRT.

R156-57-303. Renewal Cycle - Procedures.

(1) In accordance with Subsection 58-1-308(1), the renewal date for the two-year renewal cycle applicable to licensees under Title 58, Chapter 57 is established by rule in Section R156-1-308a.

(2) Renewal procedures shall be in accordance with Section R156-1-308c.

KEY: licensing, respiratory care

February 22, 2007

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58-57-1

58-1-106(1)(a)

58-1-202(1)(a)

R156. Commerce, Occupational and Professional Licensing.**R156-77. Direct-Entry Midwife Act Rule.****R156-77-101. Title.**

This rule is known as the "Direct-Entry Midwife Act Rule."

R156-77-102. Definitions.

In addition to the definitions in Title 58, Chapters 1 and 77, as used in Title 58, Chapter 77 or this rule:

(1) "Accredited school", as used in this rule, includes any midwifery school that has been granted pre-accredited status by MEAC.

(2) "Apgar score", as used in Section R156-77-601, means an index used to evaluate the condition of a newborn based on a rating of 0, 1, or 2 for each of the five characteristics of color, heart rate, response to stimulation of the sole of the foot, muscle tone, and respiration with 10 being a perfect score.

(3) "Appropriate provider", as used in Sections R156-77-601 and 602, means a licensed provider who is an appropriate contact person based on the provider's level of education and scope of practice.

(4) "Approved continuing education", as used in Subsection R156-77-303(3)(c), means:

(a) continuing education that has been approved by a nationally recognized professional organization that approves health related continuing education;

(b) a course offered by a post-secondary education institution that is accredited by an accrediting board recognized by the U.S. Department of Education, an MEAC approved midwifery program or accredited midwifery school, or an MEAC approved program or course; or

(c) continuing education that is sponsored or presented by MANA or any subgroup thereof, a government agency, a recognized direct-entry midwifery or health care association.

(5) "Collaborate", as used in Section R156-77-601, means the process by which an LDEM and another licensed health care provider jointly manage a specific condition of a client according to a mutually agreed-upon plan of care. The LDEM continues midwifery management of the client and may follow through with the medical management as agreed upon with the provider.

(6) "Consultation", as used in Section R156-77-601, means the process by which the LDEM discusses client status with an appropriate licensed health care provider by phone, written note, or in person. The provider may give a recommendation for management, but does not assume the management of the client.

(7) "CPR", as used in this rule, means cardiopulmonary resuscitation.

(8) "C-section", as used in this rule, means a cesarean section.

(9) "LDEM", as used in this rule, means a licensed direct entry midwife licensed under Title 58, Chapter 77.

(10) "LDEM Outcome Database", as used in Section R156-77-604, means a web based application created by the Division to collect data regarding the outcome of pregnancies and deliveries managed by an LDEM.

(11) "MANA", as used in this rule, means the Midwives Alliance of North America.

(12) "MEAC", as used in this rule, means the Midwifery Education Accreditation Council.

(13) "Midwifery Care", as used in this rule, has the same meaning as the practice of direct-entry midwifery as defined in Subsection 58-77-102(8).

(14) "NARM", as used in this rule, means the North American Registry of Midwives.

(15) "Refer", as used in Section R156-77-601, means the process by which an LDEM directs the client to an appropriate licensed health care provider for management of a specific condition. The LDEM continues midwifery management of the

client.

(16) "TOLAC", as used in Section R156-77-602, means a trial of labor after cesarean section.

(17) "Transfer", as used in Section R156-77-601, means the process by which an LDEM relinquishes management of a client to an appropriate licensed health care provider. The LDEM may provide on-going support services as appropriate.

(18) "Unprofessional conduct," as defined in Title 58 Chapters 1 and 77, is further defined, in accordance with Subsection 58-1-203(1)(e), in Section R156-77-502.

(19) "VBAC", as used in this rule, means a vaginal birth after cesarean section.

(20) "Weeks gestation", as used in this rule, means the age of a pregnancy calculated using accepted pregnancy dating criteria such as menstrual or ultrasound dating, to determine an estimated date of delivery which equals 40 weeks 0 days gestation and is noted as 40.0.

R156-77-103. Authority - Purpose.

This rule is adopted by the Division under the authority of Subsection 58-1-106(1)(a) to enable the Division to administer Title 58, Chapter 77.

R156-77-104. Organization - Relationship to Rule R156-1.

The organization of this rule and its relationship to Rule R156-1 is as described in Section R156-1-107.

R156-77-302a. Qualifications for licensure - Application Requirements.

In accordance with Subsections 58-1-203(1), 58-1-301(3), and 58-77-302(5), the application requirements for licensure in Section 58-77-302 are defined herein.

(1) An applicant for licensure as an LDEM must submit documentation of current CPR certification for health care providers, for both adults and infants, from one of the following organizations:

- (a) American Heart Association;
- (b) American Red Cross or its affiliates; or
- (c) American Safety and Health Institute.

(2) An applicant for licensure as an LDEM must submit documentation of current newborn or neonatal resuscitation certification from one of the following organizations:

- (a) American Academy of Pediatrics;
- (b) American Heart Association; or
- (c) a MEAC approved program or accredited school.

R156-77-302b. Qualifications for licensure - Education Requirements.

In accordance with Subsections 58-1-203(1)(b), 58-1-301(3), and 58-77-302(6), the pharmacology course requirement for licensure in Subsection 58-77-302(6) is defined herein. The course must be:

(1) offered by a post-secondary educational institution that is accredited by an accrediting board recognized by the Council for Higher Education Accreditation of the American Council on Education, a MEAC approved midwifery program or accredited midwifery school, or be a MEAC approved program or course; and

(2) at least eight clock hours in length and include basic pharmacotherapeutic principles and administration of medications including the drugs listed in Subsections 58-77-102(8)(f)(i) through (ix); or

(3) a general pharmacology course of at least 20 clock hours in length from a health-related course of study.

R156-77-303. Renewal Cycle - Procedures.

(1) In accordance with Subsection 58-1-308(1), the renewal date for the two-year renewal cycle applicable to licensees under Title 58, Chapter 77 is established by rule in

Subsection R156-1-308a(1).

(2) Renewal procedures shall be in accordance with Section R156-1-308c.

(3) Each applicant for renewal shall comply with the following:

(a) submit documentation of holding a current Certified Professional Midwife certificate in good standing with NARM;

(b) submit documentation of current certifications in adult and infant CPR, and newborn resuscitation that meets the criteria established in R156-77-302a; and

(c) complete at least two clock hours of approved continuing education in intrapartum fetal monitoring during each preceding two year licensure cycle which may be part of the hours required in Subsection (a) to maintain certification provided the hours meet the requirements established by NARM.

(4) A licensee must be able to document completion of the continuing education hours upon the request of the Division. Such documentation shall be retained until the next licensure renewal cycle.

R156-77-502. Unprofessional Conduct.

"Unprofessional conduct" includes:

(1) failure to practice in accordance with the knowledge, clinical skills, and judgments described in the MANA Core Competencies for Basic Midwifery Practice (1994), which is hereby adopted and incorporated by reference; and

(2) failing as a midwife to follow the MANA Standards and Qualifications for the Art and Practice of Midwifery (2005), which is hereby adopted and incorporated by reference.

R156-77-601. Standards of Practice.

Except as provided in Subsection 58-77-601(3)(b), and in accordance with Subsection 58-77-601(2), the standards and circumstances that require an LDEM to recommend and facilitate consultation, collaboration, referral, transfer, or mandatory transfer of client care are established herein. These standards are at a minimum level and are hierarchical in nature. If the standard requires at least consultation for a condition, an LDEM may choose to collaborate, refer, or transfer the care of the client.

(1) Consultation:

(a) antepartum:

(i) suspected intrauterine growth restriction;

(ii) severe vomiting unresponsive to LDEM treatment;

(iii) pain unrelated to common discomforts of pregnancy;

(iv) presence of condylomata that may obstruct delivery;

(v) anemia unresponsive to LDEM treatment;

(vi) history of genital herpes;

(vii) suspected or confirmed fetal demise after 14.0 weeks gestation;

(viii) suspected multiple gestation;

(ix) confirmed chromosomal or genetic aberrations;

(x) hepatitis C;

(xi) prior c-section without a second trimester ultrasound to determine the location of placental implantation; and

(xii) any other condition in the judgment of the LDEM requires consultation.

(2) Mandatory Consultation:

(a) incomplete miscarriage after 14.0 weeks gestation;

(b) failure to deliver by 42.0 weeks gestation;

(c) a fetus in the breech position after 36.0 weeks gestation;

(d) any sign or symptom of:

(i) placenta previa;

(ii) deep vein thrombosis or pulmonary embolus; or

(iii) vaginal bleeding after 20.0 weeks gestation, in a woman with a history of a c-section who has not had an ultrasound performed;

(e) Rh isoimmunization or other red blood cell isoimmunization known to cause erythroblastosis fetalis; or

(f) any other condition or symptom in the judgment of the LDEM that may place the health of the pregnant woman or unborn child at unreasonable risk.

(3) Collaborate:

(a) antepartum:

(i) infection not responsive to LDEM treatment;

(ii) seizure disorder affecting the pregnancy;

(iii) history of cervical incompetence with surgical therapy;

(iv) increase in blood pressure with a systolic pressure greater than 140 mm or a diastolic pressure greater than 90 mm in two readings at least six hours apart, no more than trace proteinuria or other evidence of preeclampsia; and

(v) any other condition in the judgment of the LDEM requires collaboration;

(b) postpartum:

(i) infection not responsive to LDEM treatment; and

(ii) any other condition in the judgment of the LDEM requires collaboration.

(4) Refer:

(a) antepartum:

(i) thyroid disease;

(ii) changes in the breasts not related to pregnancy or lactation;

(iii) severe psychiatric illness responsive to treatment;

(iv) heart disease that has been determined by a cardiologist to have potential to affect or to be affected by pregnancy, labor, or delivery; and

(v) any other condition in the judgment of the LDEM requires referral;

(b) postpartum:

(i) bladder dysfunction;

(ii) severe depression; and

(iii) any other condition in the judgment of the LDEM requires referral;

(c) newborn:

(i) birth injury requiring on-going care;

(ii) minor congenital anomaly;

(iii) jaundice beyond physiologic levels;

(iv) loss of 15% of birth weight;

(v) inability to suck or feed; and

(vi) any other condition in the judgment of the LDEM requires referral.

(5) Transfer, however may be waived in accordance with Subsection 58-77-601(3)(b):

(a) antepartum:

(i) current drug or alcohol abuse;

(ii) current diagnosis of cancer;

(iii) persistent oligohydramnios not responsive to LDEM treatment;

(iv) confirmed intrauterine growth restriction;

(v) prior c-section with unknown uterine incision type provided a reasonable effort has been made to determine the uterine scar type and the client has signed an informed consent that meets the standards established in Section R156-77-602;

(vi) history of preterm delivery less than 34.0 weeks gestation;

(vii) history of severe postpartum bleeding;

(viii) primary genital herpes outbreak;

(ix) increase in blood pressure with a systolic pressure greater than 140 mm or a diastolic pressure greater than 90 mm in two readings at least six hours apart, and 1+ to 2+ proteinuria confirmed by a 24 hour urine collection of greater than 300 mg of protein; and

(x) any other condition in the judgment of the LDEM may require transfer;

(b) intrapartum:

(i) visible genital lesions suspicious of herpes virus infection;

(ii) severe hypertension defined as a sustained diastolic blood pressure of greater than 110 mm or a systolic pressure of greater than 160 mm;

(iii) excessive vomiting, dehydration, acidosis, or exhaustion unresponsive to LDEM treatment; and

(iv) any other condition in the judgment of the LDEM may require transfer;

(c) postpartum:

(i) retained placenta; and

(ii) any other condition in the judgment of the LDEM may require transfer;

(d) newborn:

(i) gestational age assessment less than 36 weeks gestation;

(ii) major congenital anomaly not diagnosed prenatally;

(iii) persistent hyperthermia or hypothermia unresponsive to LDEM treatment; and

(iv) any other condition in the judgment of the LDEM may require transfer.

(6) Mandatory transfer:

(a) antepartum:

(i) severe preeclampsia or severe pregnancy-induced hypertension as evidenced by:

(A) a systolic pressure greater than 160 mm or a diastolic pressure greater than 110 mm in two readings at least six hours apart, or 3+ to 4+ proteinuria, or greater than 5 gms of protein in a 24 hour urine collection; or

(B) a systolic pressure greater than 140 mm or a diastolic pressure greater than 90 mm in two readings at least six hours apart, at least 1+ proteinuria, and one or more of the following:

(1) epigastric pain;

(2) headache;

(3) visual disturbances; or

(4) decreased fetal movement;

(ii) eclampsia or hemolysis, elevated liver enzymes, and low platelets syndrome (HELLP);

(iii) documented platelet count less than 75,000 platelets per mm³ of blood;

(iv) placenta previa after 27.0 weeks gestation;

(v) confirmed ectopic pregnancy;

(vi) severe psychiatric illness non-responsive to treatment;

(vii) human immunodeficiency virus (HIV) or acquired immunodeficiency syndrome (AIDS);

(viii) diagnosed deep vein thrombosis or pulmonary embolism;

(ix) multiple gestation;

(x) no onset of labor by 43.0 weeks gestation;

(xi) more than two prior c-sections;

(xii) prior c-section with a known uterine classical, inverted T or J incision, or an extension of an incision into the upper uterine segment;

(xiii) prior c-section without an ultrasound that rules out placental implantation over the uterine scar obtained no later than 35.0 weeks gestation or prior to commencement of care if the care is sought after 35.0 weeks gestation;

(xiv) prior c-section without a signed informed consent document meeting the standards established in Section R156-77-602;

(xv) prior c-section with a gestation greater than 42.0 weeks gestation;

(xvi) Rh isoimmunization or other red blood cell isoimmunization known to cause erythroblastosis fetalis, with an antibody titre of greater than 1:8;

(xvii) insulin-dependent diabetes;

(xviii) significant vaginal bleeding after 20.0 weeks gestation not consistent with normal pregnancy and posing a continuing risk to mother or baby; and

(xiv) any other condition in the judgment of the LDEM

that could place the life or long-term health of the pregnant woman or unborn child at risk;

(b) intrapartum:

(i) signs of uterine rupture;

(ii) presentation(s) not compatible with spontaneous vaginal delivery;

(iii) fetus in breech presentation during labor unless delivery is imminent;

(iv) progressive labor prior to 37.0 weeks gestation except miscarriages, confirmed fetal death, or congenital anomalies incompatible with life;

(v) prolapsed umbilical cord unless birth is imminent;

(vi) clinically significant abdominal pain inconsistent with normal labor;

(vii) seizure;

(viii) undiagnosed multiple gestation, unless delivery if imminent;

(ix) suspected chorioamnionitis;

(x) prior c-section with cervical dilation progress in the current labor of less than one centimeter in three hours once labor is active;

(xi) non-reassuring fetal heart pattern indicative of fetal distress that does not immediately respond to treatment by the LDEM, unless delivery is imminent;

(xii) moderate thick, or particulate meconium in the amniotic fluid unless delivery is imminent;

(xiii) failure to deliver after three hours of pushing unless delivery is imminent; or

(xiv) any other condition in the judgment of the LDEM that would place the life or long-term health of the pregnant woman or unborn child at significant risk if not acted upon immediately;

(c) postpartum:

(i) uncontrolled hemorrhage;

(ii) maternal shock that is unresponsive to LDEM treatment;

(iii) severe psychiatric illness non-responsive to treatment;

(iv) signs of deep vein thrombosis or pulmonary embolism; and

(v) any other condition in the judgment of the LDEM that could place the life or long-term health of the mother or infant at significant risk if not acted upon immediately;

(d) newborn:

(i) non-transient respiratory distress;

(ii) non-transient pallor or central cyanosis;

(iii) Apgar score at ten minutes of less than six;

(iv) low heart rate of less than 60 beats per minute after one complete neonatal resuscitation cycle;

(v) absent heart rate except with confirmed fetal death or congenital anomalies incompatible with life, or shoulder dystocia resulting in death;

(vi) hemorrhage;

(vii) seizure;

(viii) persistent hypertonia, lethargy, flaccidity or irritability, or jitteriness;

(ix) inability to urinate or pass meconium within the first 48 hours of life; and

(x) any other condition in the judgment of the LDEM must be transferred.

R156-77-602. Informed Consent.

In addition to the standards for informed consent established in Subsection 58-77-601(1)(b), an informed consent for a client with a previous c-section, must include the following information about a VBAC:

(1) TOLAC is associated with the risk of uterine rupture. Uterine rupture can cause brain damage or death of the baby and result in serious hemorrhage or hysterectomy in the mother.

(2) VBAC poses more medical risks to the baby than a

scheduled repeat c-section.

(3) Repeat c-section poses more medical risks to the mother than VBAC.

(4) C-section after a failed TOLAC is associated with more risks than a c-section done before labor has begun.

(5) If a complication occurs from a TOLAC outside of a hospital setting, the risk to mother and baby may be higher due to the inherent delay in obtaining access to hospital care.

(6) Multiple c-sections are associated with, but not limited to, increased risks due to abnormal placental implantation, hemorrhage requiring hysterectomy, and other surgical and postoperative complications.

(7) The risks associated with TOLAC after two c-sections are greater than those after one c-section.

(8) Risks associated with TOLAC when the type of uterine scar is unknown are greater than when the uterine scar is known to be low transverse.

(9) The 2004 National Birth Center study revealed women who attempt TOLAC in a birth center setting have an overall transfer rate of 24%, and a vaginal delivery rate of 87%.

(10) A woman with no previous vaginal birth and two previous c-sections for documented failure to progress, has a very low vaginal delivery success rate.

R156-77-603. Procedures for the Termination of Midwifery Care.

(1) The procedure to terminate midwifery care for a client who has been informed that she has or may have a condition indicating the need for medical consultation, collaboration, referral, or transfer is established herein:

(a) provide no fewer than three business days written notice, unless an emergency, during which the LDEM shall continue to provide midwifery care, to enable the client to select another licensed health care provider;

(b) provide a referral; and

(c) document the termination of care in the client's records.

(2) The procedure to terminate midwifery care to a client who has been informed that she has or may have a condition indicating the need for mandatory transfer is established herein:

(a) have the client sign a release of care indicating the LDEM has terminated providing midwifery care as of a specific date and time; or

(b) verbally instruct the client of the termination of midwifery care and document said instruction in the client record;

(c) make a reasonable effort to convey significant information regarding the client's condition to the receiving provider; and

(d) if possible, when transferring the client by ambulance or private vehicle, the LDEM accompanies the client.

KEY: licensing, midwife, direct-entry midwife

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58-1-106(1)(a)

58-1-202(1)(a)

58-77-202(4)

58-77-601(2)

R270. Crime Victim Reparations, Administration.**R270-5. Electronic Meetings.****R270-5-1. Authorization and Purpose.**

(1) Purpose. Section 52-4-207 requires any public body that convenes or conducts an electronic meeting to adopt a rule governing the use of electronic meetings. This Rule R270-5 establishes procedures for conducting Crime Victim Reparations and Assistance Board (hereinafter "Board") meetings by electronic means.

(2) Procedure. The following provisions govern any meeting at which one or more Board members appear electronically pursuant to Section 52-4-207:

(a) If one or more members of the Board desire to participate electronically, such member(s) shall contact the Director of the Crime Victim Reparations and Assistance Board (hereinafter " Director"). The Director shall assess the practicality of facility requirements needed to conduct the meeting electronically in a manner that allows for the attendance, participation and monitoring as required by this Rule. If it is practical, the Presiding Officer or Director shall determine whether to allow for such electronic participation, and the public notice of the meeting shall so indicate. In addition, the notice shall specify the anchor location where the members of the Board not participating electronically will be present and where interested persons and the public may attend, monitor, and participate in the open portions of the meeting.

(b) Notice of the meeting and the agenda shall be posted at the anchor location and be provided in accordance with the Open and Public Meetings Act. The anchor location is the physical location where the electronic meeting originates or where the participants are connected. The anchor location shall be identified in the public notice for the meeting. Unless otherwise designated in the notice, the anchor location shall be a room in the Utah Office for Victims of Crime office located at 350 East 500 South, Salt Lake City, Utah where the Board would normally meet if the Board was not holding an electronic meeting.

(c) Notice of the possibility of an electronic meeting shall be given to the Board members at least 24 hours before the meeting. In addition, the notice shall describe how a Board member may participate in the meeting electronically.

(d) When notice is given of the possibility of a Board member participating electronically, any Board member may do so and any voting Board member, whether at the anchor location or participating electronically, shall be counted as present for purposes of a quorum and may fully participate and vote. At the commencement of the meeting, or at such time as any Board member initially appears electronically, the Presiding Officer shall identify for the record all those who are participating electronically. Votes by members of the Board who are not at the anchor location of the meeting shall be confirmed by the Presiding Officer.

(e) The anchor location will have space and facilities so that interested persons and the public may attend, monitor and participate in the open portions of the meeting, as appropriate.

KEY: electronic meetings, procedures

April 6, 2016

52-4-207

R277. Education, Administration.**R277-716. Alternative Language Services for Utah Students.****R277-716-1. Authority and Purpose.**

- (1) This rule is authorized by:
 - (a) Utah Constitution Article X, Section 3, which vests general control and supervision of public education in the Board;
 - (b) Title III; and
 - (c) Subsection 53A-1-401(3), which allows the Board to adopt rules in accordance with its responsibilities.
- (2) The purpose of this rule is:
 - (a) to address the requirements of Title III and implementing regulations and case law;
 - (b) to clearly define the respective responsibilities of the Superintendent and LEAs:
 - (i) in identifying ELL/LEP students who are currently enrolled in Utah schools; and
 - (ii) in providing consistent and appropriate services to identified students; and
 - (c) in order to:
 - (i) meet Title III requirements;
 - (ii) meet funding eligibility requirements; and
 - (iii) appropriately distribute ELL/LEP funds to LEAs with adequate policies.

R277-716-2. Definitions.

- (1) "Alternative language services program" or "ALS program" means a research-based language acquisition instructional service model used to achieve English proficiency and academic progress of identified students.
- (2) "Alternative language services" or "ALS" means language services designed to meet the education needs of all language minority students so that students are able to participate effectively in the regular instruction program.
- (3) "Annual measurable achievement objectives" or "AMAOs" means English Language Proficiency Performance Targets established by the Superintendent consistent with Title III requirements for public school students who are receiving language acquisition services in the state of Utah as required by 20 U.S.C. 6842.
- (4) "Approved language acquisition instructional services model" means methods of ALS instruction that are evidence-based and recommended by the U.S. Department of Education and the Superintendent.
- (5) "Consolidated Utah Student Achievement Plan" means the application for federal funds authorized under ESEA, and other federal sources submitted annually to the Superintendent.
- (6) "English Language Learner/Limited English Proficient" or "ELL/LEP" means an individual:
 - (a) who has sufficient difficulty speaking, reading, writing, or understanding the English language, and whose difficulties may deny the individual the opportunity to:
 - (i) learn successfully in classrooms where the language of instruction is English; or
 - (ii) participate fully in society;
 - (b) who was not born in the United States or whose native language is a language other than English and who comes from an environment where a language other than English is dominant; or
 - (c) who is an American Indian or Alaskan native or who is a native resident of the outlying areas and comes from an environment where a language other than English has had a significant impact on such individual's level of English language proficiency.
- (7) "Immigrant children and youth" for purposes of this rule means individuals who:
 - (a) are ages 3 through 21;
 - (b) were born outside of the United States; and
 - (c) have not been attending one or more schools in any one

or more states of the United States for more than three full academic years.

(8) "Instructional Materials Commission" means a Commission appointed by the Board to evaluate instructional materials for recommendation by the Board consistent with Title 53A, Chapter 14, State Instructional Materials Commission.

(9) "Language acquisition instructional program" means an instructional program for students for the purpose of developing and attaining English proficiency, while meeting state academic content and achievement standards.

(10) "State Approved Endorsement Program" or "SAEP" means a professional development plan on which a licensed Utah educator is working to obtain an endorsement.

(11) "Title III" means federal provisions for providing language instruction to ELL/LEP students under 20 U.S.C. 6801, et seq.

R277-716-3. Superintendent Responsibilities.

- (1) The Superintendent shall make available an identification and placement procedure model to LEAs to provide language acquisition services for ELL/LEP students.
- (2) The Superintendent shall develop and require all LEAs to use the statewide annual assessment based on the AMAOs for English language acquisition to measure growth and progress in:
 - (a) listening;
 - (b) speaking;
 - (c) reading;
 - (d) writing; and
 - (e) comprehension.
- (3) The Utah Academic Language Proficiency Assessment (UALPA) shall be administered throughout the school year.
- (4) An LEA may determine restricted testing dates within the school year.
- (5) The Superintendent shall apply a formula and distribute funds to LEAs for identification and services to ELL/LEP students and their families.
 - (a) The formula shall provide an amount based upon eligible students and available funds, to be distributed to all eligible LEAs and consortia consistent with Title III requirements.
 - (b) The formula shall provide for an additional amount to qualifying LEAs based on numbers of immigrant children and youth.
- (6) The Superintendent shall make models and accountability measures in providing ALS services to students available to LEAs.
- (7) An LEA shall use Superintendent-identified models or models based upon educational research.
- (8) An LEA that receives Title III funds under this rule shall provide the following to the Superintendent:
 - (a) a budget as part of the Consolidated Utah Student Achievement Plan data on student achievement;
 - (b) the number of students served with Title III funds;
 - (c) assurances and documentation maintained of services or a program used to serve students;
 - (d) assurances and documentation maintained of required parent notification; and
 - (e) a biennial report summarizing the LEA's progress in Subsection (10) in addition to the annual Consolidated Utah Student Achievement Plan information.
- (9) The Superintendent shall provide timelines to LEAs for meeting Title III requirements.
- (10) The Superintendent shall assist and provide training to LEAs in development of ALS and Title III services to students who do not meet prescribed English proficiency AMAOs.
 - (11) An LEA shall maintain:
 - (a) an ALS budget plan;
 - (b) a plan for delivering student instruction;

(c) ALS assessments to date;
 (d) a sample of parent notification required under Subsection R277-716-4(7); and

(e) documentation or evidence of progress of required Title III AMAOs.

(12) The Superintendent shall conduct on-site audits of all funded ALS programs at least once every five years.

(13) The Superintendent shall provide technical assistance during on-site audits and as the Superintendent deems necessary.

R277-716-4. LEA Responsibilities.

(1) An LEA that receives funds under Title III shall assure as part of the Consolidated Utah Student Achievement Plan that the LEA has a written plan that:

(a) includes an ELL/LEP student find process, including a home language survey and a language proficiency for program placement, that is implemented with student registration;

(b) uses a valid and reliable assessment of an ELL/LEP student's English proficiency in:

- (i) listening;
- (ii) speaking;
- (iii) reading;
- (iv) writing; and
- (v) comprehension;

(c) provides language acquisition instructional services based on Board-approved Utah English Language Proficiency Standards;

(d) establishes student exit criteria from ALS programs or services; and

(e) includes the ELL/LEP student count, by classification, prior to July 1 of each year.

(2) Following receipt of Title III funds, an LEA shall:

(a) determine what type of Title III ALS services are available and appropriate for each student identified in need of ALS services, including:

- (i) dual immersion;
- (ii) ESL content-based; and
- (iii) sheltered instruction;

(b) implement an approved language acquisition instructional program designed to achieve English proficiency and academic progress of an identified student;

(c) ensure that all identified ELL/LEP students receive English language instructional services, consistent with Subsection (1)(c);

(d) provide adequate staff development to assist an ELL/LEP teacher and staff in meeting AMAOs; and

(e) provide necessary staff with:

(i) curricular materials approved by the Instructional Materials Commission consistent with Rule R277-469; and

(ii) facilities for adequate and effective training.

(3) If an LEA does not meet AMAOs, the LEA shall develop and implement improvement plans to satisfy AMAOs.

(4) Following evaluation of student achievement and services, an LEA shall:

(a) analyze results and determine the program's success or failure; and

(b) modify a program or services that are not effective in meeting the state AMAOs.

(5) An LEA shall have a policy to identify and serve students who qualify for services under IDEA, including:

(a) implementing procedures and training, consistent with federal regulations and state special education rules, that ensure ELL/LEP students are not misidentified as students with disabilities due to their inability to speak and understand English;

(b) reviewing the assessment results of a student's language proficiency in English and other language prior to initiating evaluation activities, including selecting additional

assessment tools;

(c) conducting assessments for IDEA eligibility determination and educational programming in a student's native language when appropriate;

(d) using nonverbal assessment tools when appropriate;

(e) ensuring that accurate information regarding a student's language proficiency in English and another language is considered in evaluating assessment results;

(f) considering results from assessments administered both in English and in a student's native language;

(g) ensuring that all required written notices and communications with a parent who is not proficient in English is provided in the parent's preferred language to the extent practicable, including utilizing interpretation services when appropriate; and

(h) coordinating the language acquisition instructional services and special education and related services to ensure that the IEP is implemented as written.

(6) An LEA shall provide information and training to staff that:

(a) limited English proficiency is not a disability; and

(b) if there is evidence that a student with limited English proficiency has a disability, the staff shall refer the student for possible evaluation for eligibility under IDEA.

(7)(a) An LEA shall notify a parent who is not proficient in English of the LEA's required activities.

(b) A school shall provide information about required and optional school activities in a parent's preferred language to the extent practicable.

(c) An LEA shall provide interpretation and translation services for a parent at:

- (i) registration;
- (ii) an IEP meeting;
- (iii) an SEOP meeting;
- (iv) a parent-teacher conference; and
- (v) a student disciplinary meeting.

(d) An LEA shall provide annual notice to a parent of a student placed in a language acquisition instructional program at the beginning of the school year or no later than 30 days after identification.

(e) If a student has been identified as requiring ALS services after the school year has started, the LEA shall notify the student's parent within 14 days of the student's identification and placement.

(8) A required notice described in Subsection (7) shall include:

- (a) the student's English proficiency level;
- (b) how the student's English proficiency level was assessed;

(c) the status of the student's academic achievement;

(d) the methods of instruction proposed to increase language acquisition, including using both the student's native language and English if necessary;

(e) specifics regarding how the methods of instruction will help the child learn English and meet age-appropriate academic achievement standards for grade promotion and graduation; and

(f) the specific exit requirements for the program including:

(i) the student's expected rate of transition from the program into a classroom that is not tailored for an LEP student; and

(ii) the student's expected high school graduation date if funds appropriated consistent with this rule are used for a secondary school student.

(9)(a) An LEA shall provide notice to a parent of an ELL/LEP student if the LEA fails to meet AMAOs.

(b) An LEA shall provide a parent the notice described in Subsection (9)(a) within 30 days of the LEA's receipt of the annual State Title III Accountability Report from the

Superintendent.

R277-716-5. Teacher Qualifications.

(1) A Utah educator who is assigned to provide instruction in a language acquisition instructional program shall comply with the State ESL Endorsement requirements provided in Rule R277-520.

(2) A Utah educator whose primary assignment is to provide English language instruction to an ELL/LEP student shall have an ESL or ESL or Bilingual endorsement consistent with the educator's assignment.

R277-716-6. Miscellaneous Provisions.

(1)(a) An LEA that generates less than \$10,000 from the LEA's ELL/LEP student count, may form a consortium with other similar LEAs.

(b) A consortium described in Subsection (1)(a) shall designate a fiscal agent and shall submit all budget and reporting information from all of the member LEAs of the consortium.

(c) Each member of a consortium shall submit plans and materials to the fiscal agent of the consortium for final reporting submission to the Superintendent.

(d) A fiscal agent of a consortium described in Subsection (1)(a) shall assume all responsibility of an LEA under Section R277-716-4.

(2) No LEA or consortium may withhold more than two percent of Title III funding for administrative costs in serving ELL/LEP students.

KEY: alternative language services

April 7, 2016

Notice of Continuation February 16, 2016

Art X Sec 3

53A-1-401(3)

R277. Education, Administration.**R277-920. Implementation of the School Turnaround and Leadership Development Act.****R277-920-1. Authority and Purpose.**

- (1) This rule is authorized by:
- (a) Utah Constitution Article X, Section 3, which vests general control and supervision over public education in the Board;
 - (b) Subsection 53A-1-401(3), which allows the Board to adopt rules in accordance with its responsibilities; and
 - (c) Title 53A, Chapter 1, Part 12, School Turnaround and Leadership Development Act, which requires the Board to make rules to establish:
 - (i) outcome-based measures to designate a low performing school;
 - (ii) an appeal process for the denial of a school turnaround plan;
 - (iii) consequences for a low performing school; and
 - (iv) eligibility criteria, application procedures, selection criteria, and procedures for awarding incentive pay for the School Leadership Development Program.
- (2) The purpose of this rule is to implement and administer the School Turnaround and Leadership Development Act.

R277-920-2. Definitions.

- (1) "Appeal committee" means the committee established by Section R277-920-5.
- (2) "Committee" means a school turnaround committee established in accordance with Subsection 53A-1-1204(1) or 53A-1-1205(4).
- (3) "Eligible school" means the same as that term is defined in Section 53A-1-1208.
- (4) "Low performing school" means a school:
- (a) in the lowest performing:
 - (i) 3% of the high schools statewide according to the percentage of possible points earned under the school grading system; and
 - (ii) 3% of the elementary, middle, and junior high schools statewide according to the percentage of possible points earned under the school grading system; and
 - (b) identified by another measure identified by the Board.
- (5) "Plan" means a school turnaround plan described in Subsection 53A-1-1204(3).
- (6) "School improvement grant" means a Title I grant under the Elementary and Secondary Education Act, 20 U.S.C. Sec. 6303(g).
- (7) "School leader" means the same as that term is defined in Section 53A-1-1209.
- (8) "School turnaround program" means the school turnaround program described in:
- (a) Sections 53A-1-1203 through 53A-1-1207; and
 - (b) Sections R277-920-3 through R277-920-7.

R277-920-3. Superintendent's Designation of Low Performing Schools and Waiver Authority.

- (1) The Superintendent may issue a waiver and exclude a low performing school from participating in the school turnaround program if:
- (a) the low performing school:
 - (i) has been designated a priority school by the Superintendent;
 - (ii) received school improvement grant money for the school year immediately following the school year for which the school is being graded; and
 - (iii) is already working with a turnaround expert through the school improvement grant; or
 - (b) the low performing school is in the school's first three years of operation.
- (2) If the Superintendent excludes a low performing school

from the school turnaround program as described in Subsection (1), the Superintendent shall designate additional schools, outside of the lowest performing 3% of schools statewide according to the percentage of possible points earned under the school grading system, until the school turnaround program includes at least 3% of the total public schools statewide.

(3) When selecting an additional school described in Subsection (2), the Superintendent shall include the next lowest performing schools according to the percentage of possible points earned under the school grading system.

R277-920-4. School Turnaround Plan Submission and Approval Process.

- (1) In addition to the requirements described in Subsection 53A-1-1204(3), a plan shall include at least the following:
- (a) a requirement that the school leaders of the low performing school participate in the School Leadership Development Program described in Section 53A-1-1209 and Section R277-920-8;
 - (b) a thorough analysis of the root cause of the low performing school's low performance;
 - (c) a specific and detailed plan to address the root cause of the low performing school's low performance;
 - (d) if the low performing school is a district school, a request from the local school board or district superintendent for:
 - (i) additional resources;
 - (ii) personnel; or
 - (iii) exemptions from district policy that may be contributing to the low performance of the district school; and

(e) a plan for management of school personnel, including:

- (i) recruitment of an educator or school leader; and
- (ii) professional development for an educator or school leader.

(2)(a) A local school board or charter school governing board may approve or deny a plan in whole or in part, if the part of the plan the board denies is severable from the part of the plan the board approves.

(b) A local school board or charter school governing board shall give a reason for a denial of each part of a plan.

(3) A local school board or charter school governing board shall submit a plan in accordance with Subsection 53A-1-1204(5)(b) or 53A-1-1205(7)(b) to the Superintendent.

(4)(a) In accordance with Subsection 53A-1-1206(4), the Superintendent shall review and approve or deny a plan in whole or in part, if the part of the plan the Superintendent denies is severable from the part of the plan the Superintendent approves.

(b) The Superintendent shall give a reason for a denial of each part of a plan.

R277-920-5. Appeal Process for Denial of a School Turnaround Plan.

(1) A committee, local school board, or charter school governing board may appeal the denial of a plan, in whole or in part, by following the procedures and requirements of this section.

- (2) An appeal authorized by this rule:
- (a) is an informal adjudicative proceeding under Section 63G-4-203; and
 - (b) shall be resolved by the date specified in Subsection 53A-1-1206(5)(b).

(3)(a) A principal, on behalf of a committee, may request that the local school board or the charter school governing board reconsider the denial of a plan:

- (i) by electronically filing the request:
 - (A) with the chair of the local school board or the charter school governing board; and
 - (B) on a form provided on the USOE website; and

(ii) within 5 calendar days of the denial.

(b) The reconsideration request may include a modification to the plan if the committee approves the modification.

(c) The local school board or the charter school governing board shall respond to the request within 10 calendar days by:

- (i) refusing to reconsider its action;
- (ii) approving a plan, in whole or in part; or
- (iii) denying a plan modification.

(d) The principal may appeal the denial of a plan under this Subsection (3):

(i) by electronically filing an appeal with the Superintendent on a form provided on the USOE website; and

(ii) within 5 calendar days of the denial.

(e) An appeal filed under this subsection shall be resolved in accordance with Subsections (5) and (6).

(4) A district superintendent, on behalf of a local school board, or a charter school governing board chair, on behalf of a charter school governing board, may appeal the Superintendent's denial of a plan:

(a) by electronically filing an appeal with the Superintendent on a form provided on the USOE website; and

(b) within 5 calendar days of the denial.

(5)(a) At least three members of a Board committee, appointed by the Board as the appeal committee, shall review the written appeal.

(b) The appeal committee may ask the principal, district superintendent, local school board chair, or charter school governing board chair to:

- (i) provide additional written information; or
- (ii) appear personally and provide information.

(c) The appeal committee shall make a written recommendation within 5 business days of receipt of the appeal request to the Board to accept, modify, or reject the plan and give a reason for the recommendation.

(6) The Board may accept or reject the appeal committee's recommendation and the Board's decision is the final administrative action.

R277-920-6. Consequences for a Low Performing School.

(1) The Board may impose a consequence described in this section if a low performing school does not improve the school's grade one letter grade or better within the time described in Subsection 53A-1-1207(3).

(2) The Board may restructure a low performing district school by taking over the low performing district school, or by other means as the Board deems appropriate.

(3) The Board may restructure a low performing charter school by taking over the low performing charter school, or by:

- (a) closing the low performing charter school; or
- (b) other means as the Board deems appropriate.

R277-920-7. Hearing and Procedure Requirements Related to the Board's Imposition of a Consequences for Low Performing Schools.

On or before December 1, 2016, the Superintendent shall make recommendations to the Board for changes to this rule regarding hearing and procedure requirements related to the Board's imposition of a consequence as described in Section R277-920-6.

R277-920-8. School Leadership Development Program.

(1) A school leader other than a school leader from a low performing school may apply to participate in the School Leadership Development Program if the school leader:

(a) is assigned to a priority school as designated by the Superintendent; or

(b) is nominated by the school leader's district superintendent or charter school governing board to participate.

(2) A school leader who meets the requirements of Subsection (1) may apply to participate in the School Leadership Development Program by electronically submitting an application to the Superintendent on a form provided on the USOE website by the date specified on the USOE website.

(3)(a) The Superintendent shall select a school leader to participate in the School Leadership Development Program based on the following selection criteria:

(i) first priority is given to a school leader who is assigned to a low performing school;

(ii) second priority is given to a school leader who is assigned to a priority school as designated by Superintendent; and

(iii) third priority is given to a school leader who is nominated by the school leader's district superintendent or charter school governing board.

(b) Notwithstanding Subsection (3)(a), the Superintendent may give priority to a school leader who has not received prior leadership training before selecting a school leader who has received prior leadership training.

(4)(a) In consultation with the Superintendent and the local school board chair, the district superintendent of a low performing school shall select a district administrator to participate in the School Leadership Development Program to:

(i) support the school leader participating in the School Leadership Development Program; and

(ii) assist the school district's local school board to fulfill the requirements of Subsection 53A-1-1204(4).

(b) In consultation with the Superintendent and the governing board chair, the charter director of a low performing school shall select a charter administrator to participate in the School Leadership Development Program to support the school leader participating in the School Leadership Development Program.

(5)(a) In accordance with Subsection 53A-1-1209(4), the Superintendent shall award incentive pay to a school leader within 30 days after the school leader:

(i) completes the School Leadership Development Program; and

(ii) submits a written agreement to the Superintendent to work as described in Subsection 53A-1-1209(4).

(b) The Superintendent shall evenly divide the appropriation among the school leaders who meet the requirements of this Subsection (5).

(6) The Superintendent may award incentive pay to a school leader described in Subsection (5) for up to five years.

R277-920-9. School Recognition and Reward Program.

(1) The Superintendent shall distribute school recognition and reward program money to the principal of an eligible school:

(a) in accordance with Section 53A-1-1208; and

(b) within 30 days of the Board's official release of school grades for the year the eligible school is eligible for an award of money.

(2) The Superintendent shall notify the principal of an eligible school within 15 days of the Board's official release of school grades:

(a) that the eligible school is eligible for an award of money pursuant to Section 53A-1-1208; and

(b) of the amount of the award that the eligible school will receive.

(3) In accordance with Section 53A-1-1208, the principal shall distribute the money received under Subsection (1):

(a) to each educator assigned to the school for all of the years the school participated in the school turnaround program; and

(b) in a pro-rated manner to each educator assigned to the school for less time than the school participated in the school

turnaround program.

**KEY: principals, school improvements, school leaders
February 8, 2016**

Art X, Sec 3
53A-1-401(3)
53A-1-12

R309. Environmental Quality, Drinking Water.**R309-105. Administration: General Responsibilities of Public Water Systems.****R309-105-1. Purpose.**

The purpose of this rule is to set forth the general responsibilities of public water systems, water system owners and operators.

R309-105-2 Authority.

R309-105-3 Definitions.

R309-105-4 General.

R309-105-5 Exemptions from Monitoring Requirements.

R309-105-6 Construction of Public Drinking Water Facilities.

R309-105-7 Source Protection Plans.

R309-105-8 Existing Water System Facilities.

R309-105-9 Minimum Pressure.

R309-105-10 Operation and Maintenance Procedures.

R309-105-11 Operator Certification.

R309-105-12 Cross Connection Control.

R309-105-13 Finished Water Quality.

R309-105-14 Operational Reports.

R309-105-15 Annual Reports.

R309-105-16 Reporting Test Results.

R309-105-17 Record Maintenance.

R309-105-18 Emergencies.

R309-105-2. Authority.

This rule is promulgated by the Drinking Water Board as authorized by Title 19, Environmental Quality Code, Chapter 4, Safe Drinking Water Act, Subsection 104 of the Utah Code and in accordance with 63G-3 of the same, known as the Administrative Rulemaking Act.

R309-105-3. Definitions.

Definitions for certain terms used in this rule are given in R309-110 but may be further clarified herein.

R309-105-4. General.

(1) Water suppliers are responsible for the quality of water delivered to their customers. In order to give the public reasonable assurance that the water which they are consuming is satisfactory, the Board has established rules for the design, construction, water quality, water treatment, contaminant monitoring, source protection, operation and maintenance of public water supplies.

(2) For compliance monitoring required by R309-200 through 215, public water systems must use a laboratory certified by the Utah Public Health Department in accordance with R444-14-4. The Federal Safe Drinking Water Act requires each analyte to be analyzed by a specific method. These methods are described in the July 1, 1992 through 2015, editions of 40 CFR Parts 141, 142, and 143 (Safe Drinking Water Act).

R309-105-5. Exemptions from Monitoring Requirements.

(1) The applicable requirements specified in R309-205, R309-210 and R309-215 for monitoring shall apply to each public water system, unless the public water system meets all of the following conditions:

(a) Consists only of distribution and storage facilities (and does not have any collection and treatment facilities);

(b) Obtains all of its water from, but is not owned or operated by, a public water system to which such regulations apply;

(c) Does not sell water to any person; and

(d) Is not a carrier which conveys passengers in interstate commerce.

(2) When a public water system supplies water to one or more other public water systems, the Director may modify the

monitoring requirements imposed by R309-205, R309-210 and R309-215 to the extent that the interconnection of the systems justifies treating them as a single system for monitoring purposes.

(3) In no event shall the Director authorize modifications in the monitoring requirements which are less stringent than requirements established by the Federal Safe Drinking Water Act.

R309-105-6. Construction of Public Drinking Water Facilities.

The following requirements pertain to the construction of public water systems.

(1) Approval of Engineering Plans and Specifications

(a) Complete plans and specifications for all public drinking water projects, as described in R309-500-5, shall be approved in writing by the Director prior to the commencement of construction. A 30-day review time should be assumed.

(b) Appropriate engineering reports, supporting information and master plans may also be required by the Director as needed to evaluate the proposed project. A certificate of convenience and necessity or an exemption therefrom, issued by the Public Service Commission, shall be filed with the Director prior to approval of any plans or specifications for projects described in R309-500-4(1) as new or previously un-reviewed water system.

(2) Acceptable Design and Construction Methods

(a) The design and construction methods of all public drinking water facilities shall conform to the applicable standards contained in R309-500 through R309-550 of these rules. The Director may require modifications to plans and specifications before approval is granted.

(b) There may be times in which the requirements of the applicable standards contained in R309-500 through R309-550 are not appropriate. Thus, the Director may grant an "exception" to portions of these standards if it can be shown that the granting of such an exception will not jeopardize the public health. In order for the Director to consider such a request, the public drinking water system shall submit a written request directly from the management of the public drinking water system, preferably on system letterhead, that includes the following:

(i) citation of the specific rule for which the "exception" is being requested;

(ii) a detailed explanation, drawings may be included, of why the conditions of rule cannot be met;

(iii) what the system proposes, drawings may be included, in lieu of rule;

(iv) justification the proposed alternative will protect the public health to a similar or better degree than required by rule.

Physical conditions as well as cost may be justification for requesting an "exception-to-rule."

(c) Alternative or new treatment techniques may be developed which are not specifically addressed by the applicable standards contained in R309-500 through R309-550. These treatment techniques may be accepted by the Director if it can be shown that:

(i) They will result in a finished water meeting the requirements of R309-200 of these regulations.

(ii) The technique will produce finished water which will protect public health to the same extent provided by comparable treatment processes outlined in the applicable standards contained in R309-500 through R309-550.

(iii) The technique is as reliable as any comparable treatment process governed by the applicable standards contained in R309-500 through R309-550.

(3) Description of "Public Drinking Water Project"

Refer to R309-500-5 for the description of a public drinking water project and R309-500-6 for required items to be

submitted for plan approval.

(4) Specifications for the drilling of a public water supply well may be prepared and submitted by a licensed well driller holding a current Utah Well Driller's Permit if authorized by the Director.

(5) Drawing Quality and Size

Drawings which are submitted shall be compatible with Division of Drinking Water Document storage. Drawings which are illegible or of unusual size will not be accepted for review. Drawing size shall not exceed 30" x 42" nor be less than 8-1/2" x 11".

(6) Requirements After Approval of Plans for Construction

After the approval of plans for construction, and prior to operation of any facilities dealing with drinking water, the items required by R309-500-9 shall be submitted and an operating permit received.

R309-105-7. Source Protection.

(1) Public Water Systems are responsible for protecting their sources of drinking water from contamination. R309-600 and R309-605 sets forth minimum requirements to establish a uniform, statewide program for implementation by PWSs to protect their sources of drinking water. PWSs are encouraged to enact more stringent programs to protect their sources of drinking water if they decide they are necessary.

(2) R309-600 applies to ground-water sources and to ground-water sources which are under the direct influence of surface water which are used by PWSs to supply their systems with drinking water.

(3) R309-605 applies to PWSs which obtain surface water prior to treatment and distribution and to PWSs obtaining water from ground-water sources which are under the direct influence of surface water. However, compliance with this rule is voluntary for public transient non-community water systems to the extent that they are using existing surface water sources of drinking water.

R309-105-8. Existing Water System Facilities.

(1) All public water systems shall deliver water meeting the applicable requirements of R309-200 of these rules.

(2) Existing facilities shall be brought into compliance with R309-500 through R309-550 or shall be reliably capable of delivering water meeting the requirements of R309-200.

(3) In situations where a water system is providing water of unsatisfactory quality, or when the quality of the water or the public health is threatened by poor physical facilities, the water system management shall solve the problem(s).

R309-105-9. Minimum Water Pressure.

(1) Unless otherwise specifically approved by the Director, no water supplier shall allow any connection to the water system where the dynamic water pressure at the point of connection will fall below 20 psi during the normal operation of the water system. Water systems approved prior to January 1, 2007, are required to maintain the above minimum dynamic water pressure at all locations within their distribution system. Existing public drinking water systems, approved prior to January 1, 2007, which expand their service into new areas or supply new subdivisions shall meet the minimum dynamic water pressure requirements in R309-105-9(2) at any point of connection in the new service areas or new subdivisions.

(2) Unless otherwise specifically approved by the Director, new public drinking water systems constructed after January 1, 2007 shall be designed and shall meet the following minimum water pressures at points of connection:

- (a) 20 psi during conditions of fire flow and fire demand experienced during peak day demand;
- (b) 30 psi during peak instantaneous demand; and
- (c) 40 psi during peak day demand.

(3) Individual home booster pumps are not allowed as indicated in R309-540-5(4)(c).

R309-105-10. Operation and Maintenance Procedures.

All routine operation and maintenance of public water supplies shall be carried out with due regard for public health and safety. The following sections describe procedures which shall be used in carrying out some common operation and maintenance procedures.

(1) Chemical Addition

(a) Water system operators shall determine that all chemicals added to water intended for human consumption are suitable for potable water use and comply with ANSI/NSF Standard 60.

(b) No chemicals or other substances shall be added to public water supplies unless the chemical addition facilities and chemical type have been reviewed and approved by the Director.

(c) Chlorine, when used in the distribution system, shall be added in sufficient quantity to achieve either "breakpoint" and yield a detectable free chlorine residual or a detectable combined chlorine residual in the distribution system at points to be determined by the Director. Residual checks shall be taken a minimum of three times each week by the operator of any system using disinfectants. The Director may, however, reduce the frequency of residual checks if he determines that this would be an unwarranted hardship on the water system operator and, furthermore, the disinfection equipment has a verified record of reliable operation. Suppliers, when checking for residuals, shall use test kits and methods which meet the requirements of the U.S. EPA. The "DPD" test method is recommended for free chlorine residuals. Information on the suppliers of this equipment is available from the Division of Drinking Water.

(2) New and Repaired Mains

(a) All new water mains shall meet the requirements of R309-550-6 with regard to materials of construction. All products in contact with culinary water shall comply with ANSI/NSF Standard 61.

(b) All new and repaired water mains or appurtenances shall be disinfected in accordance with AWWA Standard C651-92. The chlorine solution shall be flushed from the water main with potable water prior to the main being placed in use.

(c) All products used to recoat the interiors of storage structures and which may come in contact with culinary water shall comply with ANSI/NSF Standard 61.

(3) Reservoir Maintenance and Disinfection

After a reservoir has been entered for maintenance or re-coating, it shall be disinfected prior to being placed into service. Procedures given in AWWA Standard C651-92 shall be followed in this regard.

(4) Spring Collection Area Maintenance

(a) Spring collection areas shall be periodically cleared of deep rooted vegetation to prevent root growth from clogging collection lines. Frequent hand or mechanical clearing of spring collection areas is strongly recommended. It is advantageous to encourage the growth of grasses and other shallow rooted vegetation for erosion control and to inhibit the growth of more detrimental flora.

(b) No pesticide (e.g., herbicide) may be applied on a spring collection area without the prior written approval of the Director. Such approval shall be given 1) only when acceptable pesticides are proposed; 2) when the pesticide product manufacturer certifies that no harmful substance will be imparted to the water; and 3) only when spring development meets the requirements of these rules (see R309-515-7).

(5) Security

All water system facilities such as spring junction boxes, well houses, reservoirs, and treatment facilities shall be secure.

(6) Seasonal Operation

Water systems operated seasonally shall be disinfected and flushed according to the techniques given in AWWA Standard C651-92 and C652-92 prior to each season's use. A satisfactory bacteriologic sample shall be achieved prior to use. During the non-use period, care shall be taken to close all openings into the system.

(7) Pump Lubricants

All oil lubricated pumps for culinary wells shall utilize mineral oils suitable for human consumption as determined by the Director. To assure proper performance, and to prevent the voiding of any warranties which may be in force, the water supplier should confirm with individual pump manufacturers that the oil which is selected will have the necessary properties to perform satisfactorily.

R309-105-11. Operator Certification.

All community and non-transient non-community water systems or any public system that employs treatment techniques for surface water or ground water under the direct influence of surface water shall have an appropriately certified operator in accordance with the requirements of these rules. Refer to R309-300, Certification Rules for Water Supply Operators, for specific requirements.

R309-105-12. Cross Connection Control.

(1) The water supplier shall not allow a connection to his system which may jeopardize its quality and integrity. Cross connections are not allowed unless controlled by an approved and properly operating backflow prevention assembly. The requirements of Chapter 6 of the 2009 International Plumbing Code and its amendments as adopted by the Department of Commerce under R156-56 shall be met with respect to cross connection control and backflow prevention.

(2) Each water system shall have a functioning cross connection control program. The program shall consist of five designated elements documented on an annual basis. The elements are:

(a) a legally adopted and functional local authority to enforce a cross connection control program (i.e., ordinance, bylaw or policy);

(b) providing public education or awareness material or presentations;

(c) an operator with adequate training in the area of cross connection control or backflow prevention;

(d) written records of cross connection control activities, such as, backflow assembly inventory; and

(e) test history and documentation of on-going enforcement (hazard assessments and enforcement actions) activities.

(3) Suppliers shall maintain, as proper documentation, an inventory of each pressure atmospheric vacuum breaker, double check valve, reduced pressure zone principle assembly, and high hazard air gap used by their customers, and a service record for each such assembly.

(4) Backflow prevention assemblies shall be in-line serviceable (repairable), in-line testable and have certification through third party certifying agencies to be used within a public drinking water system. Third party certification shall consist of any combination of two certifications, laboratory or field, performed by a recognized testing organization which has demonstrated competency to perform such tests.

(5) Backflow prevention assemblies shall be inspected and tested at least once a year, by an individual certified for such work as specified in R309-305. Suppliers shall maintain, as proper documentation, records of these inspections. This testing responsibility may be borne by the water system or the water system management may require that the customer having the backflow prevention assembly be responsible for having the

device tested.

(6) Suppliers serving areas also served by a pressurized irrigation system shall prevent cross connections between the two. Requirements for pressurized irrigation systems are outlined in Section 19-4-112 of the Utah Code.

R309-105-13. Finished Water Quality.

All public water systems are required to monitor their water according to the requirements of R309-205, R309-210 and R309-215 to determine if the water quality standards of R309-200 have been met. Water systems are also required to keep records and, under certain circumstances, give public notice as required in R309-220.

R309-105-14. Operational Reports.**(1) Written Operational Reports.**

(a) If, in the opinion of the Director, a water system is not properly operated, the Director may require a public water system to submit a written operational report covering the operation of the whole or a part of the water system's infrastructure.

(b) The Director may require revisions to the submitted operational report to ensure satisfactory operation, and may order the water system to follow the operational report.

(c) If the water system fails to implement the provisions of the operational report, as evidenced by unsatisfactory delivery of a safe and/or reliable supply of drinking water, the Director may order further remedies as deemed necessary.

(2) Treatment techniques for acrylamide and epichlorohydrin.

(a) Each public water system shall certify annually in writing to the Director (using third party or manufacturer's certification) that when acrylamide and epichlorohydrin are used in drinking water systems, the combination (or product) of dose and monomer level does not exceed the levels specified in R309-215-8(2)(c).

(b) Certifications may rely on manufacturer's data.

(3)(a) All water systems using chemical addition or specialized equipment for the treatment of drinking water shall regularly complete operational reports. This information shall be evaluated to confirm that the treatment process is being done properly, resulting in successful treatment.

(b) The information to be provided, and the frequency at which it is to be gathered and reported, will be determined by the Director.

R309-105-15. Annual Reports.

All community water systems shall be required to complete annual report forms furnished by the Division of Drinking Water. The information to be provided shall include: the status of all water system projects started during the previous year; water demands met by the system; problems experienced; and anticipated projects.

R309-105-16. Reporting Test Results.

(1) If analyses are made by certified laboratories other than the state laboratory, these results shall be forwarded to the Division as follows:

(a) The supplier shall report to the Division the analysis of water samples which fail to comply with the Primary Drinking Water Standards of R309-200. Except where a different reporting period is specified in R309-205, R309-210 or R309-215, this report shall be submitted within 48 hours after the supplier receives the report from his lab. The Division may be reached at (801)536-4200.

(b) Monthly summaries of bacteriologic results shall be submitted within ten days following the end of each month.

(c) All results of TTHM samples shall be reported to the Division within 10 days of receipt of analysis for systems

monitoring pursuant to R309-210-9.

(d) For all samples other than samples showing unacceptable results, bacteriologic samples or TTHM samples, the time between the receipt of the analysis and the reporting of the results to the Division shall not exceed 40 days.

(e) Arsenic sampling results shall be reported to the nearest 0.001 mg/L.

(f) There are additional reporting requirements in other sections of the rules, see R309-215-16(5).

(2) Disinfection byproducts, maximum residual disinfectant levels and disinfection byproduct precursors and enhanced coagulation or enhanced softening. This section applies to the reporting requirements of R309-210-8, R309-215-12 and R309-215-13. For the reporting requirements of R309-210-9, R309-210-10 and R309-215-15 are contained within R309-210-9, R309-210-10 and R309-215-15, respectively.

(a) Systems required to sample quarterly or more frequently shall report to the State within 10 days after the end of each quarter in which samples were collected. Systems required to sample less frequently than quarterly shall report to the State within 10 days after the end of each monitoring period in which samples were collected. The Director may choose to perform calculations and determine whether the MCL was exceeded, in lieu of having the system report that information.

(b) Disinfection byproducts. Systems shall report the information specified.

(i) Systems monitoring for TTHMs and HAA5 under the requirements of R309-210-8(2) on a quarterly or more frequent basis shall report:

(A) The number of samples taken during the last quarter.

(B) The location, date, and result of each sample taken during the last quarter.

(C) The arithmetic average of all samples taken in the last quarter.

(D) The annual arithmetic average of the quarterly arithmetic averages of this section for the last four quarters.

(E) Whether, based on R309-210-8(6)(b)(i), the MCL was violated.

(ii) Systems monitoring for TTHMs and HAA5 under the requirements of R309-210-8(2) less frequently than quarterly (but at least annually) shall report:

(A) The number of samples taken during the last year.

(B) The location, date, and result of each sample taken during the last monitoring period.

(C) The arithmetic average of all samples taken over the last year.

(D) Whether, based on R309-210-8(6)(b)(i), the MCL was violated.

(iii) Systems monitoring for TTHMs and HAA5 under the requirements of R309-210-8(2) less frequently than annually shall report:

(A) The location, date, and result of the last sample taken.

(B) Whether, based on R309-210-8(6)(b)(i), the MCL was violated.

(iv) Systems monitoring for chlorite under the requirements of R309-210-8(2) shall report:

(A) The number of entry point samples taken each month for the last 3 months.

(B) The location, date, and result of each sample (both entry point and distribution system) taken during the last quarter.

(C) For each month in the reporting period, the arithmetic average of all samples taken in each three sample set taken in the distribution system.

(D) Whether, based on R309-210-8(6)(b)(ii), the MCL was violated.

(v) System monitoring for bromate under the requirements of R309-210-8(2) shall report:

(A) The number of samples taken during the last quarter.

(B) The location, date, and result of each sample taken during the last quarter.

(C) The arithmetic average of the monthly arithmetic averages of all samples taken in the last year.

(D) Whether, based on R309-210-8(6)(b)(iii), the MCL was violated.

(c) Disinfectants. Systems shall report the information specified to the Director within ten days after the end of each month the system serves water to the public, except as otherwise noted:

(i) Systems monitoring for chlorine or chloramines under the requirements of R309-210-8(3)(a) shall report and certify, by signing the report form provided by the Director, that all the information provided is accurate and correct and that any chemical introduced into the drinking water complies with ANSI/NSF Standard 60:

(A) The number of samples taken during each month of the last quarter.

(B) The monthly arithmetic average of all samples taken in each month for the last 12 months.

(C) The arithmetic average of all monthly averages for the last 12 months.

(D) The additional data required in R309-210-8(3)(a)(ii).

(E) Whether, based on R309-210-8(6)(c)(i), the MRDL was violated.

(ii) Systems monitoring for chlorine dioxide under the requirements of R309-210-8(3) shall report:

(A) The dates, results, and locations of samples taken during the last quarter.

(B) Whether, based on R309-210-8(6)(c)(ii), the MRDL was violated.

(C) Whether the MRDL was exceeded in any two consecutive daily samples and whether the resulting violation was acute or nonacute.

(d) Disinfection byproduct precursors and enhanced coagulation or enhanced softening. Systems shall report the information specified.

(i) Systems monitoring monthly or quarterly for TOC under the requirements of R309-215-12 and required to meet the enhanced coagulation or enhanced softening requirements in R309-215-13(2)(b) or (c) shall report:

(A) The number of paired (source water and treated water) samples taken during the last quarter.

(B) The location, date, and results of each paired sample and associated alkalinity taken during the last quarter.

(C) For each month in the reporting period that paired samples were taken, the arithmetic average of the percent reduction of TOC for each paired sample and the required TOC percent removal.

(D) Calculations for determining compliance with the TOC percent removal requirements, as provided in R309-215-13(3)(a).

(E) Whether the system is in compliance with the enhanced coagulation or enhanced softening percent removal requirements in R309-215-13(2) for the last four quarters.

(ii) Systems monitoring monthly or quarterly for TOC under the requirements of R309-215-12 and meeting one or more of the alternative compliance criteria in R309-215-13(1)(b) or (c) shall report:

(A) The alternative compliance criterion that the system is using.

(B) The number of paired samples taken during the last quarter.

(C) The location, date, and result of each paired sample and associated alkalinity taken during the last quarter.

(D) The running annual arithmetic average based on monthly averages (or quarterly samples) of source water TOC for systems meeting a criterion in R309-215-13(1)(b)(i) or (iii) or of treated water TOC for systems meeting the criterion in

R309-215-13(1)(b)(ii).

(E) The running annual arithmetic average based on monthly averages (or quarterly samples) of source water SUVA for systems meeting the criterion in R309-215-13(1)(b)(v) or of treated water SUVA for systems meeting the criterion in R309-215-13(1)(b)(vi).

(F) The running annual average of source water alkalinity for systems meeting the criterion in R309-215-13(1)(b)(iii) and of treated water alkalinity for systems meeting the criterion in R309-215-13(1)(c)(i).

(G) The running annual average for both TTHM and HAA5 for systems meeting the criterion in R309-215-13(1)(b)(iii) or (iv).

(H) The running annual average of the amount of magnesium hardness removal (as CaCO₃, in mg/L) for systems meeting the criterion in R309-215-13(1)(c)(ii).

(I) Whether the system is in compliance with the particular alternative compliance criterion in R309-215-13(1)(b) or (c).

(3) The public water system, within 10 days of completing the public notification requirements under R309-220 for the initial public notice and any repeat notices, shall submit to the Division a certification that it has fully complied with the public notification regulations. The public water system shall include with this certification a representative copy of each type of notice distributed, published, posted, and made available to the persons served by the system and to the media.

(4) All samples taken in accordance with R309-215-6 shall be submitted within 10 days following the end of the operational period specified for that particular treatment. Finished water samples results for the contaminant of concern that exceed the Primary Drinking Water Standards of R309-200, shall be reported to the Division within 48 hours after the supplier receives the report. The Division may be reached at (801) 536-4000.

(5) Documentation of operation and maintenance for point-of-use or point-of-entry treatment units shall be provided to the Division annually. The Division shall receive the documentation by January 31 annually.

R309-105-17. Record Maintenance.

All public water systems shall retain on their premises or at convenient location near their premises the following records:

(1) Records of microbiological analyses and turbidity analyses made pursuant to this Section shall be kept for not less than five years. Records of chemical analyses made pursuant to this Section shall be kept for not less than ten years. Actual laboratory reports may be kept, or data may be transferred to tabular summaries, provided that the following information is included:

(a) The date, place and time of sampling, and the name of the person who collected the sample;

(b) Identification of the sample as to whether it was a routine distribution system sample, check sample, raw or process water sample or other special purpose sample.

(c) Date of analysis;

(d) Laboratory and person responsible for performing analysis;

(e) The analytical technique/method used; and

(f) The results of the analysis.

(2) Lead and copper recordkeeping requirements.

(a) Any water system subject to the requirements of R309-210-6 shall retain on its premises original records of all sampling data and analyses, reports, surveys, letters, evaluations, schedules, Director determinations, and any other information required by R309-210-6.

(b) Each water system shall retain the records required by this section for no fewer than 12 years.

(3) Records of action taken by the system to correct violations of primary drinking water regulations shall be kept for

a period not less than three years after the last action taken with respect to the particular violation involved.

(4) Copies of any written reports, summaries or communications relating to sanitary surveys of the system conducted by the system itself, by a private consultant, or by any local, State or Federal agency, shall be kept for a period not less than ten years after completion of the sanitary survey involved.

(5) Records concerning a variance or exemption granted to the system shall be kept for a period ending not less than five years following the expiration of such variance or exemption.

(6) Records that concern the tests of a backflow prevention assembly and location shall be kept by the system for a minimum of not less than five years from the date of the test.

(7) Copies of public notices issued pursuant to R309-220 and certifications made to the Director pursuant to R309-105-16 shall be kept for three years after issuance.

(8) Copies of monitoring plans developed pursuant to these rules shall be kept for the same period of time as the records of analyses taken under the plan are required to be kept under R309-105-17(1), except as otherwise specified. In all cases the monitoring plans shall be kept as long as the any associated report.

(9) A water system must retain a complete copy of your IDSE report submitted under this section for 10 years after the date that you submitted your IDSE report. If the Director modifies the R309-210-10 monitoring requirements that you recommended in your IDSE report or if the Director approves alternative monitoring locations, you must keep a copy of the Director's notification on file for 10 years after the date of the Director's notification. You must make the IDSE report and any Director notification available for review by the Director or the public.

(10) A water system must retain a complete copy of its 40/30 certification submitted under this R309-210-9 for 10 years after the date that you submitted your certification. You must make the certification, all data upon which the certification is based, and any Director notification available for review by the Director or the public.

(11) A water subject to the disinfection profiling requirements of R309-215-14 shall keep must keep results of profile (raw data and analysis) indefinitely.

(12) A water system subject to the disinfection benchmarking requirements of R309-215-14 shall keep must keep results of profile (raw data and analysis) indefinitely.

R309-105-18. Emergencies.

(1) The Director or the local health department shall be informed by telephone by a water supplier of any "emergency situation". The term "emergency situation" includes the following:

(a) The malfunction of any disinfection facility such that a detectable residual cannot be maintained at all points in the distribution system.

(b) The malfunction of any "complete" treatment plant such that a clearwell effluent turbidity greater than 5 NTU is maintained longer than fifteen minutes.

(c) Muddy or discolored water (which cannot be explained by air entrainment or re-suspension of sediments normally deposited within the distribution system) is experienced by a significant number of individuals on a system.

(d) An accident has occurred which has, or could have, permitted the entry of untreated surface water and/or other contamination into the system (e.g. break in an unpressurized transmission line, flooded spring area, chemical spill, etc.)

(e) A threat of sabotage has been received by the water supplier or there is evidence of vandalism or sabotage to any public drinking water supply facility which may affect the quality of the delivered water.

(f) Any instance where a consumer reports becoming sick by drinking from a public water supply and the illness is substantiated by a doctor's diagnosis (unsubstantiated claims should also be reported to the Division of Drinking Water, but this is not required).

(2) If an emergency situation exists, the water supplier shall then contact the Division in Salt Lake City within eight hours. Division personnel may be reached at all times through 801-536-4123.

(3) All suppliers are advised to develop contingency plans to cope with possible emergency situations. In many areas of the state the possibility of earthquake damage shall be realistically considered.

KEY: drinking water, watershed management

May 1, 2016

19-4-104

Notice of Continuation March 13, 2015

R309. Environmental Quality, Drinking Water.**R309-110. Administration: Definitions.****R309-110-1. Purpose.**

The purpose of this rule is to define certain terms and expressions that are utilized throughout all rules under R309. Collectively, those rules govern the administration, monitoring, operation and maintenance of public drinking water systems as well as the design and construction of facilities within said systems.

R309-110-2. Authority.

This rule is promulgated by the Drinking Water Board as authorized by Title 19, Environmental Quality Code, Chapter 4, Safe Drinking Water Act, Subsection 104 of the Utah Code and in accordance with 63G-3 of the same, known as the Administrative Rulemaking Act.

R309-110-3. Acronyms.

As used in R309:

"AF" means Acre Foot.
 "AWOP" means Area Wide Optimization Program.
 "AWWA" means American Water Works Association.
 "BAT" means Best Available Technology.
 "C" means Residual Disinfectant Concentration.
 "CCP" means Composite Correction Program.
 "CCR" means Consumer Confidence Report.
 "CEU" means Continuing Education Unit.
 "CFE" means Combined Filter Effluent.
 "CFR" means Code of Federal Regulations.
 "cfs" means Cubic Feet Per Second.
 "CPE" means Comprehensive Performance Evaluation.
 "CT" means Residual Concentration multiplied by Contact Time.
 "CTA" means Comprehensive Technical Assistance.
 "CWS" means Community Water System.
 "DBPs" means Disinfection Byproducts.
 "DE" means Diatomaceous Earth.
 "DTF" means Data Transfer Format.
 "DWSP" means Drinking Water Source Protection.
 "EP" means Entry Point.
 "EPA" means Environmental Protection Agency.
 "ERC" means Equivalent Residential Connection.
 "FBRR" means Filter Backwash Recycling Rule.
 "fps" means Feet Per Second
 "FR" means Federal Register.
 "gpd" means Gallons Per Day.
 "gpm" means Gallons Per Minute.
 "gpm/sf" means Gallons Per Minute Per Square Foot.
 "GWR" means Ground Water Rule.
 "GWUDI" means Ground Water Under Direct Influence of Surface Water.
 "HAA5s" means Haloacetic Acids (Five).
 "HPC" means Heterotrophic Plate Count.
 "ICR" means Information Collection Rule of 40 CRF 141 subpart M.
 "IESWTR" means Interim Enhanced Surface Water Treatment Rule.
 "IFE" means Individual Filter Effluent.
 "LT1ESWTR" means Long Term 1 Enhanced Surface Water Treatment Rule.
 "LT2ESWTR" means Long Term 2 Enhanced Surface Water Treatment Rule.
 "MCL" means Maximum Contaminant Level.
 "MCLG" means Maximum Contaminant Level Goal.
 "M and R" means Monitoring and Reporting.
 "MDBP" means Microbial-Disinfection Byproducts.
 "M/DBP Cluster" means Microbial-Disinfectants/Disinfection Byproducts Cluster.
 "MG" means Million Gallons.

"MGD" means Million Gallons Per Day.

"mg/L" means Milligrams Per Liter

"MRDL" means Maximum Residual Disinfectant Level.

"MRDLG" means Maximum Residual Disinfectant Level

Goal.

"NCWS" means Non-Community Water System.

"NTNC" means Non-Transient Non-Community.

"NTU" means Nephelometric Turbidity Unit.

"PN" means Public Notification.

"POE" means Point-of-Entry.

"POU" means Point-of-Use.

"PWS" means Public Water System.

"PWS-ID" means Public Water System Identification

Number.

"RTC" means Return to Compliance.

"SDWA" means Safe Drinking Water Act.

"SDWIS/FED" means Safe Drinking Water Information

System/Federal Version.

"SDWIS/STATE" means Safe Drinking Water Information

System/State Version.

"SNC" means Significant Non-Compliance.

"Stage 1 DBPR" means Stage 1 Disinfectants and Disinfection Byproducts Rule.

"Stage 2 DBPR" means Stage 2 Disinfectants and Disinfection Byproducts Rule.

"Subpart H" means A PWS using SW or GWUDI.

"Subpart P" means A PWS using SW or GWUDI and serving at least 10,000 people.

"Subpart S" means Provisions of 40 CRF 141 subpart S commonly referred to as the Information Collection Rule.

"Subpart T" means A PWS using SW or GWUDI and serving less than 10,000 people.

"SUVA" means Specific Ultraviolet Absorption.

"SW" means Surface Water.

"SWAP" means Source Water Assessment Program.

"SWTR" means Surface Water Treatment Rule.

"T" means Contact Time.

"TA" means Technical Assistance.

"TCR" means Total Coliform Rule.

"TNCWS" means Transient Non-Community Water System.

"TNTC" means Too Numerous To Count.

"TOC" means Total Organic Carbon.

"TT" means Treatment Technique.

"TTHM" means Total Trihalomethanes.

"UAC" means Utah Administrative Code.

"UPDWR" means Utah Public Drinking Water Rules (R309 of the UAC).

"WCP" means Watershed Control Program.

"WHP" means Wellhead Protection.

R309-110-4. Definitions.

As used in R309:

"Action Level" means the concentration of lead or copper in drinking water tap samples (0.015 mg/l for lead and 1.3 mg/l for copper) which determines, in some cases, the corrosion treatment, public education and lead line replacement requirements that a water system is required to complete.

"AF" means acre foot and is the volume of water required to cover an acre to a depth of one foot (one AF is equivalent to 325,851 gallons).

"Air gap" The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, catch basin, plumbing fixture or other device and the flood level rim of the receptacle. This distance shall be two times the diameter of the effective opening for openings greater than one inch in diameter where walls or obstructions are spaced from the nearest inside edge of the pipe opening a distance greater than three times the diameter of the

effective openings for a single wall, or a distance greater than four times the diameter of the effective opening for two intersecting walls. This distance shall be three times the diameter of the effective opening where walls or obstructions are closer than the distances indicated above.

"ANSI/NSF" refers to the American National Standards Institute and NSF International. NSF International has prepared at least two health effect standards dealing with treatment chemicals added to drinking water and system components that will come into contact with drinking water, these being Standard 60 and Standard 61. The American National Standards Institute acts as a certifying agency, and determines which laboratories may certify to these standards.

"Approval" unless indicated otherwise, shall be taken to mean a written statement of acceptance from the Director.

"Approved" refers to a rating placed on a system by the Division and means that the public water system is operating in substantial compliance with all the Rules of R309.

"Average Yearly Demand" means the amount of water delivered to consumers by a public water system during a typical year, generally expressed in MG or AF.

"AWWA" refers to the American Water Works Association located at 6666 West Quincy Avenue, Denver, Colorado 80235. Reference within these rules is generally to a particular Standard prepared by AWWA and which has completed the ANSI approval process such as ANSI/AWWA Standard C651-92 (AWWA Standard for Disinfecting Water Mains).

"Backflow" means the undesirable reversal of flow of water or mixtures of water and other liquids, gases, or other substances into the distribution pipes of the potable water supply from any source. Also see backsiphonage, backpressure and cross-connection.

"Backpressure" means the phenomena that occurs when the customer's pressure is higher than the supply pressure. This could be caused by an unprotected cross connection between a drinking water supply and a pressurized irrigation system, a boiler, a pressurized industrial process, elevation differences, air or steam pressure, use of booster pumps or any other source of pressure. Also see backflow, backsiphonage and cross connection.

"Backsiphonage" means a form of backflow due to a reduction in system pressure which causes a subatmospheric or negative pressure to exist at a site or point in the water system. Also see backflow and cross-connection.

"Bag Filters" are pressure-driven separation devices that remove particle matter larger than 1 micrometer using an engineered porous filtration media. They are typically constructed of a non-rigid, fabric filtration media housed in a pressure vessel in which the direction of flow is from the inside of the bag to outside.

"Bank Filtration" is a water treatment process that uses a well to recover surface water that has naturally infiltrated into ground water through a river bed or bank(s). Infiltration is typically enhanced by the hydraulic gradient imposed by a nearby pumping water supply or other well(s).

"Best Available Technology" (BAT) means the best technology, treatment techniques, or other means which the Director finds, after examination under field conditions and not solely under laboratory conditions, are available (taking cost into consideration). For the purposes of setting MCLs for synthetic organic chemicals, any BAT must be at least as effective as granular activated carbon for all these chemicals except vinyl chloride. Central treatment using packed tower aeration is also identified as BAT for synthetic organic chemicals.

"Board" means the Drinking Water Board.

"Body Politic" means the State or its agencies or any political subdivision of the State to include a county, city, town, improvement district, taxing district or any other governmental

subdivision or public corporation for the State.

"Breakpoint Chlorination" means addition of chlorine to water until the chlorine demand has been satisfied. At this point, further addition of chlorine will result in a free residual chlorine that is directly proportional to the amount of chlorine added beyond the breakpoint.

"C" is short for "Residual Disinfectant Concentration."

"Capacity Development" means technical, managerial, and financial capabilities of the water system to plan for, achieve, and maintain compliance with applicable drinking water standards.

"Cartridge filters" are pressure-driven separation devices that remove particulate matter larger than 1 micrometer using an engineered porous filtration media. They are typically constructed as rigid or semi-rigid, self-supporting filter elements housed in pressure vessels in which flow is from the outside of the cartridge to the inside.

"cfs" means cubic feet per second and is one way of expressing flowrate (one cfs is equivalent to 448.8 gpm).

"Class" means the level of certification of Backflow Prevention Technician (Class I, II or III).

"Clean compliance history" means a record of no MCL violations; and no coliform treatment technique trigger exceedances or treatment technique violations.

"Coagulation" is the process of destabilization of the charge (predominantly negative) on particulates and colloids suspended in water. Destabilization lessens the repelling character of particulates and colloids and allows them to become attached to other particles so that they may be removed in subsequent processes. The particulates in raw waters (which contribute to color and turbidity) are mainly clays, silt, viruses, bacteria, fulvic and humic acids, minerals (including asbestos, silicates, silica, and radioactive particles), and organic particulate.

"Collection area" means the area surrounding a ground-water source which is underlain by collection pipes, tile, tunnels, infiltration boxes, or other ground-water collection devices.

"Combined distribution system" is the interconnected distribution system consisting of the distribution systems of wholesale systems and of the consecutive systems that receive finished water.

"Commission" means the Operator Certification Commission.

"Community Water System" (CWS) means a public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

"Compliance cycle" means the nine-year calendar year cycle during which public water systems must monitor. Each compliance cycle consists of three three-year compliance periods. The first calendar year cycle began January 1, 1993 and ends December 31, 2001; the second begins January 1, 2002 and ends December 31, 2010; the third begins January 1, 2011 and ends December 31, 2019.

"Compliance period" means a three-year calendar year period within a compliance cycle. Each compliance cycle has three three-year compliance periods. Within the first compliance cycle, the first compliance period ran from January 1, 1993 to December 31, 1995; the second from January 1, 1996 to December 31, 1998; and the third is from January 1, 1999 to December 31, 2001.

"Comprehensive Performance Evaluation" (CPE) is a thorough review and analysis of a treatment plant's performance-based capabilities and associated administrative, operation and maintenance practices. It is conducted to identify factors that may be adversely impacting a plant's capability to achieve compliance and emphasizes approaches that can be implemented without significant capital improvements. For

purposes of compliance with these rules, the comprehensive performance evaluation must consist of at least the following components: Assessment of plant performance; evaluation of major unit processes; identification and prioritization of performance limiting factors; assessment of the applicability of comprehensive technical assistance; and preparation of a CPE report.

"Confirmed SOC contamination area" means an area surrounding and including a plume of SOC contamination of the soil or water which previous monitoring results have confirmed. The area boundaries may be determined by measuring 3,000 feet horizontally from the outermost edges of the confirmed plume. The area includes deeper aquifers even though only the shallow aquifer is the one contaminated.

"Confluent growth" means a continuous bacterial growth covering the entire filtration area of a membrane filter, or a portion of the filtration area in which discrete bacterial colonies can not be distinguished.

"Consecutive system" is a public water system that receives some or all of its finished water from one or more wholesale systems. Delivery may be through a direct connection or through the distribution system or one or more consecutive systems.

"Contaminant" means any physical, chemical biological, or radiological substance or matter in water.

"Continuing Education Unit" (CEU) means ten contact hours of participation in, and successful completion of, an organized and approved continuing education experience under responsible sponsorship, capable direction, and qualified instruction. College credit in approved courses may be substituted for CEUs on an equivalency basis.

"Conventional Surface Water Treatment" means a series of processes including coagulation, flocculation, sedimentation, filtration and disinfection resulting in substantial particulate removal and inactivation of pathogens.

"Controls" means any codes, ordinances, rules, and regulations that a public water system can cite as currently in effect to regulate potential contamination sources; any physical conditions which may prevent contaminants from migrating off of a site and into surface or ground water; and any site with negligible quantities of contaminants.

"Corrective Action" refers to a rating placed on a system by the Division and means a provisional rating for a public water system not in compliance with the Rules of R309, but making all the necessary changes outlined by the Director to bring them into compliance.

"Corrosion inhibitor" means a substance capable of reducing the corrosiveness of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials.

"Credit Enhancement Agreement" means any agreement entered into between the Board, on behalf of the State, and an eligible water system for the purpose of providing methods and assistance to eligible water systems to improve the security for and marketability of drinking water project obligations.

"Criteria" means the conceptual standards that form the basis for DWSP area delineation to include distance, ground-water time of travel, aquifer boundaries, and ground-water divides.

"Criteria threshold" means a value or set of values selected to represent the limits above or below which a given criterion will cease to provide the desired degree of protection.

"Cross-Connection" means any actual or potential connection between a drinking (potable) water system and any other source or system through which it is possible to introduce into the public drinking water system any used water, industrial fluid, gas or substance other than the intended potable water. For example, if you have a pump moving non-potable water and hook into the drinking water system to supply water for the

pump seal, a cross-connection or mixing may lead to contamination of the drinking water. Also see backsiphonage, backpressure and backflow.

"Cross Connection Control Program" means the program administered by the public water system in which cross connections are either eliminated or controlled.

"Cross Connection Control Commission" means the duly constituted advisory subcommittee appointed by the Board to advise the Board on Backflow Technician Certification and the Cross Connection Control Program of Utah.

"CT" or "CT_{calc}" is the product of "residual disinfectant concentration" (C) in mg/l determined before or at the first customer, and the corresponding "disinfectant contact time" (T) in minutes, i.e., "C" x "T." If a public water system applies disinfectant at more than one point prior to the first customer, the summation of each CT value for each disinfectant sequence before or at the first customer determines the total percent inactivation or "Total Inactivation Ratio." In determining the Total Inactivation Ratio, the public water system must determine the residual disinfectant concentration of each disinfection sequence and corresponding contact time before any subsequent disinfection application point(s).

"CT_{req'd}" is the CT value required when the log reduction credit given the filter is subtracted from the (3-log) inactivation requirement for Giardia lamblia or the (4-log) inactivation requirement for viruses.

"CT_{99.9}" is the CT value required for 99.9 percent (3-log) inactivation of Giardia lamblia cysts. CT_{99.9} for a variety of disinfectants and conditions appear in Tables 1.1-1.6, 2.1, and 3.1 of Section 141.74(b)(3) in the code of Federal Regulations (also available from the Division).

"Designated person" means the person appointed by a public water system to ensure that the requirements of their Drinking Water Source Protection Plan(s) for ground water sources and/or surface water sources are met.

"Desired Design Discharge Rate" means the discharge rate selected for the permanent pump installed in a public drinking water well source. This pumping rate is selected by the water system owner or engineer and can match or be the same rate utilized during the constant rate pump test required by R309-515 and R309-600 to determine delineated protection zones. For consideration of the number of permanent residential connections or ERC's that a well source can support (see Safe Yield) the Director will consider 2/3 of the test pumping rate as the safe yield.

"Detectable residual" means the minimum level of free chlorine in the water that the analysis method is capable of detecting and indicating positive confirmation.

"Direct Employment" means that the operator is directly compensated by the drinking water system to operate that drinking water system.

"Direct Filtration" means a series of processes including coagulation and filtration, but excluding sedimentation, resulting in substantial particulate removal.

"Direct Responsible Charge" means active on-site control and management of routine maintenance and operation duties. A person in direct responsible charge is generally an operator of a water treatment plant or distribution system who independently makes decisions during normal operation which can affect the sanitary quality, safety, and adequacy of water delivered to customers. In cases where only one operator is employed by the system, this operator shall be considered to be in direct responsible charge.

"Director" means the Director of the Division of Drinking Water.

"Disadvantaged Communities" are defined as those communities located in an area which has a median adjusted gross income which is less than or equal to 80% of the State's median adjusted gross income, as determined by the Utah State

Tax commission from federal individual income tax returns excluding zero exemptions returns.

"Discipline" means type of certification (Distribution or Treatment).

"Disinfectant Contact Time" ("T" in CT calculations) means the time in minutes that it takes water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration ("C") is measured. Where only one "C" is measured, "T" is the time in minutes that it takes water to move from the point of disinfectant application to a point before or at where residual disinfectant concentration ("C") is measured. Where more than one "C" is measured, "T" is (a) for the first measurement of "C," the time in minutes that it takes water to move from the first or only point of disinfectant application to a point before or at the point where the first "C" is measured and (b) for subsequent measurements of "C," the time in minutes that it takes for water to move from the previous "C" measurement point to the "C" measurement point for which the particular "T" is being calculated. Disinfectant contact time in pipelines must be calculated by dividing the internal volume of the pipe by the maximum hourly flow rate through that pipe. Disinfectant contact time within mixing basins and storage reservoirs must be determined by tracer studies or an equivalent demonstration.

"Disinfection" means a process which inactivates pathogenic organisms in water by chemical oxidants or equivalent agents (see also Primary Disinfection and Secondary Disinfection).

"Disinfection profile" is a summary of daily *Giardia lamblia* inactivation through the treatment plant.

"Distribution System" means the use of any spring or well source, distribution pipelines, appurtenances, and facilities which carry water for potable use to consumers through a public water supply. Systems which chlorinate groundwater are in this discipline.

"Distribution System Manager" means the individual responsible for all operations of a distribution system.

"Division" means the Utah Division of Drinking Water, who acts as staff to the Director and is also part of the Utah Department of Environmental Quality.

"Dose-monitoring Strategy" is the method by which a UV reactor maintains the required dose at or near some specified value by monitoring UV dose delivery. Such strategies must include, at a minimum, flow rate and UV intensity (measured via duty UV sensor) and lamp status. They sometimes include UVT and lamp power. Two common Dose-monitoring Strategies are the UV Intensity Setpoint Approach and the Calculated Dose Approach.

(1) The "UV Intensity Setpoint Approach" relies on one or more "setpoints" for UV intensity that are established during validation testing to determine UV dose. During operations, the UV intensity as measured by the UV sensors must meet or exceed the setpoint(s) to ensure delivery of the required dose. Reactors must also be operated within validated operation conditions for flow rates and lamp status. In the UV Intensity Setpoint Approach, UVT does not need to be monitored separately. Instead, the intensity readings by the sensors account for changes in UVT. The operating strategy can be with either a single setpoint (one UV intensity setpoint is used for all validated flow rates) or a variable setpoint (the UV intensity setpoint is determined using a lookup table or equation for a range of flow rates).

(2) The "Calculated Dose Approach" uses a dose-monitoring equation to estimate the UV dose based on operating conditions (typically flow rate, UV intensity, and UVT). The dose-monitoring equation may be developed by the UV manufacturers using numerical methods; or the systems use an empirical dose-monitoring equation developed through

validation testing. During reactor operations, the UV reactor control system inputs the measured parameters into the dose-monitoring equation to produce a calculated dose. The system operator divides the calculated dose by the Validation Factor (see the 2006 Final UV Guidance Manual Chapter 5 for more details on the Validation Factor) and compares the resulting value to the required dose for the target pathogen and log inactivation level.

"Dose Equivalent" means the product of the absorbed dose from ionizing radiation and such factors as account for differences in biological effectiveness due to the type of radiation and its distribution in the body as specified by the International Commission of Radiological Units and Measurements (ICRU).

"Drinking Water" means water that is fit for human consumption and meets the quality standards of R309-200. Common usage of terms such as culinary water, potable water or finished water are synonymous with drinking water.

"Drinking Water Project" means any work or facility necessary or desirable to provide water for human consumption and other domestic uses which has at least fifteen service connections or serves an average of twenty-five individuals daily for at least sixty days of the year and includes collection, treatment, storage, and distribution facilities under the control of the operator and used primarily with the system and collection, pretreatment or storage facilities used primarily in connection with the system but not under such control.

"Drinking Water Project Obligation" means any bond, note or other obligation issued to finance all or part of the cost of acquiring, constructing, expanding, upgrading or improving a drinking water project.

"Drinking Water Regional Planning" means a county wide water plan, administered locally by a coordinator, who facilitates the input of representatives of each public water system in the county with a selected consultant, to determine how each public water system will either collectively or individually comply with source protection, operator certification, monitoring (including consumer confidence reports), capacity development (including technical, financial and managerial aspects), environmental issues, available funding and related studies.

"Dual sample set" is a set of two samples collected at the same time and same location, with one sample analyzed for TTHM and the other sample analyzed for HAA5. Dual sample sets are collected for the purposes of conducting an IDSE under R309-210-9 and determining compliance with the TTHM and HAA5 MCLs under R309-210-10.

"Duty UV Sensors (or Duty Sensors)" are on-line sensors installed in the UV reactor and continuously monitor UV intensity during UV equipment operations.

"DWSP Program" means the program to protect drinking water source protection zones and management areas from contaminants that may have an adverse effect on the health of persons.

"DWSP Zone" means the surface and subsurface area surrounding a ground-water or surface water source of drinking water supplying a PWS, over which or through which contaminants are reasonably likely to move toward and reach such water source.

"Emergency Storage" means that storage tank volume which provides water during emergency situations, such as pipeline failures, major trunk main failures, equipment failures, electrical power outages, water treatment facility failures, source water supply contamination, or natural disasters.

"Engineer" means a person licensed under the Professional Engineers and Land Surveyors Licensing Act, 58-22 of the Utah Code, as a "professional engineer" as defined therein.

"Enhanced coagulation" means the addition of sufficient coagulant for improved removal of disinfection byproduct

precursors by conventional filtration treatment.

"Enhanced softening" means the improved removal of disinfection byproduct precursors by precipitative softening.

"Equalization Storage" means that storage tank volume which stores water during periods of low demand and releases the water under periods of high demand. Equalization storage provides a buffer between the sources and distribution for the varying daily water demands. Typically, water demands are high in the early morning or evening and relatively low in the middle of the night. A rule-of-thumb for equalization storage volume is that it should be equal to one average day's use.

"Equivalent Residential Connection" (ERC) is a term used to evaluate service connections to consumers other than the typical residential domicile. Public water system management is expected to review annual metered drinking water volumes delivered to non-residential connections and estimate the equivalent number of residential connections that these represent based upon the average of annual metered drinking water volumes delivered to true single family residential connections. This information is utilized in evaluation of the system's source and storage capacities (refer to R309-510).

"Existing ground-water source of drinking water" means a public supply ground-water source for which plans and specifications were submitted to the Division on or before July 26, 1993.

"Existing surface water source of drinking water" means a public supply surface water source for which plans and specifications were submitted to the Division on or before June 12, 2000.

"Filtration" means a process for removing particulate matter from water by passage through porous media.

"Filter profile" is a graphical representation of individual filter performance, based on continuous turbidity measurements or total particle counts versus time for an entire filter run, from startup to backwash inclusively, that includes an assessment of filter performance while another filter is being backwashed.

"Financial Assistance" means a drinking water project loan, credit enhancement agreement, interest buy-down agreement or hardship grant.

"Finished water" is water that is introduced into the distribution system of a public water system and is intended for distribution and consumption without further treatment, except as treatment necessary to maintain water quality in the distribution system (e.g., booster disinfection, addition of corrosion control chemicals).

"Fire Suppression Storage" means that storage tank volume allocated to fire suppression activities. It is generally determined by the requirements of the local fire marshal, expressed in gallons, and determined by the product of a minimum flowrate in gpm and required time expressed in minutes.

"First draw sample" means a one-liter sample of tap water, collected in accordance with an approved lead and copper sampling site plan, that has been standing in plumbing pipes at least 6 hours and is collected without flushing the tap.

"Flash Mix" is the physical process of blending or dispersing a chemical additive into an unblended stream. Flash Mixing is used where an additive needs to be dispersed rapidly (within a period of one to ten seconds). Common usage of terms such as "rapid mix" or "initial mix" are synonymous with flash mix.

"Floc" means flocculated particles or agglomerated particles formed during the flocculation process. Flocculation enhances the agglomeration of destabilized particles and colloids toward settleable (or filterable) particles (flocs). Flocculated particles may be small (less than 0.1 mm diameter) micro flocs or large, visible flocs (0.1 to 3.0 mm diameter).

"Flocculation" means a process to enhance agglomeration of destabilized particles and colloids toward settleable (or

filterable) particles (flocs). Flocculation begins immediately after destabilization in the zone of decaying mixing energy (downstream from the mixer) or as a result of the turbulence of transporting flow. Such incidental flocculation may be an adequate flocculation process in some instances. Normally flocculation involves an intentional and defined process of gentle stirring to enhance contact of destabilized particles and to build floc particles of optimum size, density, and strength to be subsequently removed by settling or filtration.

"Flowing stream" is a course of running water flowing in a definite channel.

"fps" means feet per second and is one way of expressing the velocity of water.

"G" is used to express the energy required for mixing and for flocculation. It is a term which is used to compare velocity gradients or the relative number of contacts per unit volume per second made by suspended particles during the flocculation process. Velocity gradients G may be calculated from the following equation: $G = \text{square root of the value}(550 \text{ times } P \text{ divided by } u \text{ times } V)$. Where: P = applied horsepower, u = viscosity, and V = effective volume.

"GAC10" means granular activated carbon filter beds with an empty-bed contact time of 10 minutes based on average daily flow and a carbon reactivation frequency of every 180 days, except that the reactivation frequency for GAC10 used as a best available technology for compliance with R309-210-10 MCLs under R309-200-5(3)(i)(A) shall be 120 days.

"GAC20" means granular activated carbon filter beds with an empty-bed contact time of 20 minutes based on average daily flow and a carbon reactivation frequency of every 240 days.

"Geologist" means a person licensed under the Professional Geologist Licensing Act, 58-76 of the Utah Code, as a "professional geologist" as defined therein.

"Geometric Mean" the geometric mean of a set of N numbers $X_1, X_2, X_3, \dots, X_N$ is the Nth root of the product of the numbers.

"gpd" means gallons per day and is one way of expressing average daily water demands experienced by public water systems.

"gpm" means gallons per minute and is one way of expressing flowrate.

"gpm/sf" means gallons per minute per square foot and is one way of expressing flowrate through a surface area.

"Grade" means any one of four possible steps within a certification discipline of either water distribution or water treatment. Grade I indicates knowledge and experience requirements for the smallest type of public water supply. Grade IV indicates knowledge and experience levels appropriate for the largest, most complex type of public water supply.

"Gross Alpha Particle Activity" means the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample.

"Gross Beta Particle Activity" means the total radioactivity due to beta particle emission as inferred from measurements on a dry sample.

"ground water of high quality" means a well or spring producing water deemed by the Director to be of sufficiently high quality that no treatment is required. Such sources shall have been designed and constructed in conformance with these rules, have been tested to establish that all applicable drinking water quality standards (as given in rule R309-200) are reliably and consistently met, have been deemed not vulnerable to natural or man-caused contamination, and the public water system management have established adequate protection zones and management policies in accordance with rule R309-600.

"ground water of low quality" means a well or spring which, as determined by the Director, cannot reliably and consistently meet the drinking water quality standards described in R309-200. Such sources shall be deemed to be a low quality

ground water source if any of the conditions outlined in subsection R309-505-8(1) exist. Ground water that is classified "UDI" is a subset of this definition and requires "conventional surface water treatment" or an acceptable alternative.

"Ground Water Source" means any well, spring, tunnel, adit, or other underground opening from or through which ground water flows or is pumped from subsurface water-bearing formations.

"Ground Water Under the Direct Influence of Surface Water" or "UDI" or "GWUDI" means any water beneath the surface of the ground with significant occurrence of insects or other macro organisms, algae, or large-diameter pathogens such as *Giardia lamblia*, or *Cryptosporidium*, or significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions. Direct influence will be determined for individual sources in accordance with criteria established by the Director. The determination of direct influence may be based on site-specific measurements of water quality and/or documentation of well or spring construction and geology with field evaluation.

"Haloacetic acids"(five) (HAA5) mean the sum of the concentrations in mg/L of the haloacetic acid compounds (monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid), rounded to two significant figures after addition.

"Hardship Grant" means a grant of monies to a political subdivision that meets the drinking water project loan considerations whose project is determined by the Board to not be economically feasible unless grant assistance is provided. A hardship grant may be authorized in the following forms:

(1) a Planning Advance which will be required to be repaid at a later date, to help meet project costs incident to planning to determine the economic, engineering and financial feasibility of a proposed project;

(2) a Design Advance which will be required to be repaid at a later date, to help meet project costs incident to design including, but not limited to, surveys, preparation of plans, working drawings, specifications, investigations and studies; or

(3) a Project Grant which will not be required to be repaid.

"Hardship Grant Assessment" means an assessment applied to loan recipients. The assessment shall be calculated as a percentage of principal. Hardship grant assessment funds shall be subject to the requirements of UAC R309-700 for hardship grants.

"Hotel, Motel or Resort" shall include tourist courts, motor hotels, resort camps, hostels, lodges, dormitories and similar facilities, and shall mean every building, or structure with all buildings and facilities in connection, kept, used, maintained as, advertised as, or held out to the public to be, a place where living accommodations are furnished to transient guests or to groups normally occupying such facilities on a seasonal or short term basis.

"Hydrogeologic methods" means the techniques used to translate selected criteria and criteria thresholds into mappable delineation boundaries. These methods include, but are not limited to, arbitrary fixed radii, analytical calculations and models, hydrogeologic mapping, and numerical flow models.

"Inactivation" means, in the context of UV disinfection, a process by which a microorganism is rendered unable to reproduce, thereby rendering it unable to infect a host.

"Initial compliance period" means the first full three-year compliance period which begins at least 18 months after promulgation, except for contaminants listed in R309-200-5(3)(a), Table 200-2 numbers 19 to 33; R309-200-5(3)(b), Table 200-3 numbers 19 to 21; and R309-200-5(1)(c), Table 200-1 numbers 1, 5, 8, 11 and 18, initial compliance period means the first full three-year compliance after promulgation for systems with 150 or more service connections (January 1993-December

1995), and first full three-year compliance period after the effective date of the regulation (January 1996-December 1998) for systems having fewer than 150 service connections.

"Intake", for the purposes of surface water drinking water source protection, means the device used to divert surface water and also the conveyance to the point immediately preceding treatment, or, if no treatment is provided, at the entry point to the distribution system.

"Interest Buy-Down Agreement" means any agreement entered into between the Board, on behalf of the State, and a political subdivision, for the purpose of reducing the cost of financing incurred by a political subdivision on bonds issued by the subdivision for drinking water project costs.

"Labor Camp" shall mean one or more buildings, structures, or grounds set aside for use as living quarters for groups of migrant laborers or temporary housing facilities intended to accommodate construction, industrial, mining or demolition workers.

"Lake / reservoir" refers to a natural or man made basin or hollow on the Earth's surface in which water collects or is stored that may or may not have a current or single direction of flow.

"Land management strategies" means zoning and non-zoning controls which include, but are not limited to, the following: zoning and subdivision ordinances, site plan reviews, design and operating standards, source prohibitions, purchase of property and development rights, public education programs, ground water monitoring, household hazardous waste collection programs, water conservation programs, memoranda of understanding, written contracts and agreements, and so forth.

"Land use agreement" means a written agreement, memoranda or contract wherein the owner(s) agrees not to locate or allow the location of uncontrolled potential contamination sources or pollution sources within zone one of new wells in protected aquifers or zone one of surface water sources. The owner(s) must also agree not to locate or allow the location of pollution sources within zone two of new wells in unprotected aquifers and new springs unless the pollution source agrees to install design standards which prevent contaminated discharges to ground water. This restriction must be binding on all heirs, successors, and assigns. Land use agreements must be recorded with the property description in the local county recorder's office. Refer to R309-600-13(2)(d).

Land use agreements for protection areas on publicly owned lands need not be recorded in the local county recorder office. However, a letter must be obtained from the Administrator of the land in question and meet the requirements described above.

"Large water system" for the purposes of R309-210-6 only, means a water system that serves more than 50,000 persons.

"Lead free" means, for the purposes of R309-210-6, when used with respect to solders and flux refers to solders and flux containing not more than 0.2 percent lead; when used with respect to pipes and pipe fittings refers to pipes and pipe fittings containing not more than 8.0 percent lead; and when used with respect to plumbing fittings and fixtures intended by the manufacturer to dispense water for human ingestion refers to fittings and fixtures that are in compliance with standards established in accordance with 42 U.S.C. 300 g-6(e).

"Lead service line" means a service line made of lead which connects the water main to the building inlet and any lead pigtails, gooseneck or other fitting which is connected to such lead line.

"Legionella" means a genus of bacteria, some species of which have caused a type of pneumonia called Legionnaires Disease.

"Level 1 assessment" means an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the

likely reason that the system triggered the assessment. It is conducted by the system operator or owner. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., whether a ground water system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The system must conduct the assessment consistent with any State directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system.

"Level 2 assessment" means an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment. A Level 2 assessment provides a more detailed examination of the system (including the system's monitoring and operational practices) than does a Level 1 assessment through the use of more comprehensive investigation and review of available information, additional internal and external resources, and other relevant practices. It is conducted by an individual approved by the State, which may include the system operator. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., whether a ground water system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The system must conduct the assessment consistent with any State directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system. The system must comply with any expedited actions or additional actions required by the State in the case of an E. coli MCL violation.

"Locational running annual average (LRAA)" is the average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

"Major Bacteriological Routine Monitoring Violation" means that no routine bacteriological sample was taken as required by R309-210-5(1).

"Major Bacteriological Repeat Monitoring Violation" - means that no repeat bacteriological sample was taken as required by R309-210-5(2).

"Major Chemical Monitoring Violation" - means that no initial background chemical sample was taken as required in R309-515-4(5).

"Management area" means the area outside of zone one and within a two-mile radius where the Optional Two-mile Radius Delineation Procedure has been used to identify a protection area.

For wells, land may be excluded from the DWSP management area at locations where it is more than 100 feet lower in elevation than the total drilled depth of the well.

For springs and tunnels, the DWSP management area is all land at elevation equal to or higher than, and within a two-mile radius, of the spring or tunnel collection area. The DWSP management area also includes all land lower in elevation than, and within 100 horizontal feet, of the spring or tunnel collection area. The elevation datum to be used is the point of water collection. Land may also be excluded from the DWSP management area at locations where it is separated from the

ground water source by a surface drainage which is lower in elevation than the spring or tunnel collection area.

"Man-Made Beta Particle and Photon Emitters" means all radionuclides emitting beta particles and/or photons listed in Maximum Permissible Body Burdens and maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure, "NBS Handbook 69," except the daughter products of thorium-232, uranium-235 and uranium-238.

"Master Plan" (or "System Capacity and Expansion Report") means a organized plan addressing the present and future demands that will be placed on a public drinking water system by expanding into undeveloped areas or accepting additional service contracts. As a minimum a satisfactory master plan must contain the following elements:

(a) A listing of sources including: the source name, the source type (i.e., well, spring, reservoir, stream etc.) for both existing sources and additional sources identified as needed for system expansion, the minimum reliable flow of the source in gallons per minute, the status of the water right and the flow capacity of the water right.

(b) A listing of storage facilities including: the storage tank name, the type of material (i.e., steel, concrete etc.), the diameter, the total volume in gallons, and the elevation of the overflow, the lowest level (elevation) of the equalization volume, the fire suppression volume, and the emergency volume or the outlet.

(c) A listing of pump stations including: the pump station name and the pumping capacity in gallons per minute. Under this requirement one does not need to list well pump stations as they are provided in requirement (a) above.

(d) A listing of the various pipeline sizes within the distribution system with their associated pipe materials and, if readily available, the approximate length of pipe in each size and material category. A schematic of the distribution piping showing node points, elevations, length and size of lines, pressure zones, demands, and coefficients used for the hydraulic analysis required by (h) below will suffice.

(e) A listing by customer type (i.e., single family residence, 40 unit condominium complex, elementary school, junior high school, high school, hospital, post office, industry, commercial etc.) along with an assessment of their associated number of ERC'S.

(f) The number of connections along with their associated ERC value that the public drinking water system is committed to serve, but has not yet physically connected to the infrastructure.

(g) A description of the nature and extent of the area currently served by the water system and a plan of action to control addition of new service connections or expansion of the public drinking water system to serve new development(s). The plan shall include current number of service connections and water usage as well as land use projections and forecasts of future water usage.

(h) A hydraulic analysis of the existing distribution system along with any proposed distribution system expansion identified in (g) above.

(i) A description of potential alternatives to manage system growth, including interconnections with other existing public drinking water systems, developer responsibilities and requirements, water rights issues, source and storage capacity issues and distribution issues.

"Maximum Contaminant Level" (MCL) means the maximum permissible level of a contaminant in water which is delivered to any user of a public water system.

"Maximum residual disinfectant level" (MRDL) means a level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects. For chlorine and

chloramines, a PWS is in compliance with the MRDL when the running annual average of monthly averages of samples taken in the distribution system, computed quarterly, is less than or equal to the MRDL. For chlorine dioxide, a PWS is in compliance with the MRDL when daily samples are taken at the entrance to the distribution system and no two consecutive daily samples exceed the MRDL. MRDLs are enforceable in the same manner as MCLs pursuant to UT Code S 19-4-104. There is convincing evidence that addition of a disinfectant is necessary for control of waterborne microbial contaminants. Notwithstanding the MRDLs listed in R309-200-5(3), operators may increase residual disinfectant levels of chlorine or chloramines (but not chlorine dioxide) in the distribution system to a level and for a time necessary to protect public health to address specific microbiological contamination problems caused by circumstances such as distribution line breaks, storm runoff events, source water contamination, or cross-connections.

"Maximum residual disinfectant level goal" (MRDLG) means the maximum level of a disinfectant added for water treatment at which no known or anticipated adverse effect on the health of persons would occur, and which allows an adequate margin of safety. MRDLGs are non-enforceable health goals and do not reflect the benefit of the addition of the chemical for control of waterborne microbial contaminants.

"Medium-size water system" for the purposes of R309-210-6 only, means a water system that serves greater than 3,300 and less than or equal to 50,000 persons.

"Membrane filtration" is a pressure or vacuum driven separation process in which particulate matter larger than 1 micrometer is rejected by an engineered barrier, primarily through a size-exclusion mechanism, and which has a measurable removal efficiency of a target organism that can be verified through the application of a direct integrity test. This definition includes that common membrane technologies of microfiltration, ultrafiltration, nanofiltration, and reverse osmosis.

"Metropolitan area sources" means all sources within a metropolitan area. A metropolitan area is further defined to contain at least 3,300 year round residents. A small water system which has sources within a metropolitan system's service area, may have those sources classified as a metropolitan area source.

"MG" means million gallons and is one way of expressing a volume of water.

"MGD" means million gallons per day and is one way of expressing average daily water demands experienced by public water systems or the capacity of a water treatment plant.

"mg/L" means milligrams per liter and is one way of expressing the concentration of a chemical in water. At small concentrations, mg/L is synonymous with "ppm" (parts per million).

"Minor Bacteriological Routine Monitoring Violation" means that not all of the routine bacteriological samples were taken as required by R309-210-5(1).

"Minor Bacteriological Repeat Monitoring Violation" means that not all of the repeat bacteriological samples were taken as required by R309-210-5(2).

"Minor Chemical Monitoring Violation" means that the required chemical sample(s) was not taken in accordance with R309-205 and R309-210.

"Modern Recreation Camp" means a campground accessible by any type of vehicular traffic. The camp is used wholly or in part for recreation, training or instruction, social, religious, or physical education activities or whose primary purpose is to provide an outdoor group living experience. The site is equipped with permanent buildings for the purpose of sleeping, a drinking water supply under pressure, food service facilities, and may be operated on a seasonal or short term basis. These types of camps shall include but are not limited to

privately owned campgrounds such as youth camps, church camps, boy or girl scout camps, mixed age groups, family group camps, etc.

"Near the first service connection" means one of the service connections within the first 20 percent of all service connections that are nearest to the treatment facilities.

"Negative Interest" means a loan having loan terms with an interest rate at less than zero percent. The repayment schedule for loans having a negative interest rate will be prepared by the Board.

"New ground water source of drinking water" means a public supply ground water source of drinking water for which plans and specifications are submitted to the Division after July 26, 1993.

"New surface water source of drinking water" means a public supply surface water source of drinking water for which plans and specifications are submitted to the Division after June 12, 2000.

"New Water System" means a system that will become a community water system or non-transient, non-community water system on or after October 1, 1999.

"Non-Community Water System" (NCWS) means a public water system that is not a community water system. There are two types of NCWS's: transient and non-transient.

"Non-distribution system plumbing problem" means a coliform contamination problem in a public water system with more than one service connection that is limited to the specific service connection from which a coliform-positive sample was taken.

"Nonpoint source" means any diffuse source of contaminants or pollutants not otherwise defined as a point source.

"Non-Transient Non-Community Water System" (NTNCWS) means a public water system that regularly serves at least 25 of the same nonresident persons per day for more than six months per year. Examples of such systems are those serving the same individuals (industrial workers, school children, church members) by means of a separate system.

"Not Approved" refers to a rating placed on a system by the Division and means the water system does not fully comply with all the Rules of R309 as measured by R309-400.

"NTU" means Nephelometric Turbidity Units and is an acceptable method for measuring the clarity of water utilizing an electronic nephelometer (see "Standard Methods for Examination of Water and Wastewater").

"Off-specification" means a UV facility is operating outside of the validated operating conditions, for example, at a flow rate higher than the validated range or a UVT below the validated range).

"Operator" means a person who operates, repairs, maintains, and is directly employed by a public drinking water system.

"Operator Certification Commission" means the Commission appointed by the Board as an advisory Commission on public water system operator certification.

"Operating Permit" means written authorization from the Director to actually start utilizing a facility constructed as part of a public water system.

"Optimal corrosion control treatment" for the purposes of R309-210-6 only, means the corrosion control treatment that minimizes the lead and copper concentrations at users' taps while insuring that the treatment does not cause the water system to violate any national primary drinking water regulations.

"Package Plants" refers to water treatment plants manufactured and supplied generally by one company which are reportedly complete and ready to hook to a raw water supply line. Caution, some plants do not completely comply with all requirements of these rules and will generally require additional

equipment.

"PCBs" means a group of chemicals that contain polychlorinated biphenyl.

"Peak Day Demand" means the amount of water delivered to consumers by a public water system on the day of highest consumption, generally expressed in gpd or MGD. This peak day will likely occur during a particularly hot spell in the summer. In contrast, some systems associated with the skiing industry may experience their "Peak Day Demand" in the winter.

"Peak Hourly Flow" means the maximum hourly flow rate from a water treatment plant and utilized when the plant is preparing disinfection profiling as called for in R309-215-14(2).

"Peak Instantaneous Demand" means calculated or estimated highest flowrate that can be expected through any water mains of the distribution network of a public water system at any instant in time, generally expressed in gpm or cfs (refer to section R309-510-9).

"Person" means an individual, corporation, company, association, partnership; municipality; or State, Federal, or tribal agency.

"Picocurie" (pCi) means that quantity of radioactive material producing 2.22 nuclear transformations per minute.

"Plan Approval" means written approval, by the Director, of contract plans and specifications for any public drinking water project which have been submitted for review prior to the start of construction (see also R309-500-7).

"Plant intake" refers to the works or structures at the head of a conduit through which water is diverted from a source (e.g., river or lake) into the treatment plant.

"Plug Flow" is a term to describe when water flowing through a tank, basin or reactors moves as a plug of water without ever dispersing or mixing with the rest of the water flowing through the tank.

"Point of Disinfectant Application" is the point where the disinfectant is applied and water downstream of that point is not subject to re-contamination by surface water runoff.

"Point of Diversion"(POD) is the point at which water from a surface source enters a piped conveyance, storage tank, or is otherwise removed from open exposure prior to treatment.

"Point-of-Entry Treatment Device" means a treatment device applied to the drinking water entering a house or building for the purpose of reducing contaminants in the drinking water distributed throughout the house or building.

"Point-of-Use Treatment Device" means a treatment device applied to a single tap used for the purpose of reducing contaminants in drinking water at that one tap.

"Point source" means any discernible, confined, and discrete source of pollutants or contaminants, including but not limited to any site, pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, animal feeding operation with more than ten animal units, landfill, or vessel or other floating craft, from which pollutants are or may be discharged.

"Political Subdivision" means any county, city, town, improvement district, metropolitan water district, water conservancy district, special service district, drainage district, irrigation district, separate legal or administrative entity created under Title 11, Chapter 13, Interlocal Cooperation Act, or any other entity constituting a political subdivision under the laws of Utah.

"Pollution source" means point source discharges of contaminants to ground or surface water or potential discharges of the liquid forms of "extremely hazardous substances" which are stored in containers in excess of "applicable threshold planning quantities" as specified in SARA Title III. Examples of possible pollution sources include, but are not limited to, the following: storage facilities that store the liquid forms of extremely hazardous substances, septic tanks, drain fields, class V underground injection wells, landfills, open dumps,

landfilling of sludge and septage, manure piles, salt piles, pit privies, drain lines, and animal feeding operations with more than ten animal units.

The following definitions are part of R309-600 and clarify the meaning of "pollution source:"

(1) "Animal feeding operation" means a lot or facility where the following conditions are met: animals have been or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12 month period, and crops, vegetation forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility. Two or more animal feeding operations under common ownership are considered to be a single feeding operation if they adjoin each other, if they use a common area, or if they use a common system for the disposal of wastes.

(2) "Animal unit" means a unit of measurement for any animal feeding operation calculated by adding the following numbers; the number of slaughter and feeder cattle multiplied by 1.0, plus the number of mature dairy cattle multiplied by 1.4, plus the number of swine weighing over 55 pounds multiplied by 0.4, plus the number of sheep multiplied by 0.1, plus the number of horses multiplied by 2.0.

(3) "Extremely hazardous substances" means those substances which are identified in the Sec. 302(EHS) column of the "TITLE III LIST OF LISTS - Consolidated List of Chemicals Subject to Reporting Under SARA Title III," (EPA 550-B-96-015). A copy of this document may be obtained from: NCEPI, PO Box 42419, Cincinnati, OH 45202. Online ordering is also available at <http://www.epa.gov/ncepihom/orderpub.html>.

"Potential contamination source" means any facility or site which employs an activity or procedure which may potentially contaminate ground or surface water. A pollution source is also a potential contamination source.

"ppm" means parts per million and is one way of expressing the concentration of a chemical in water. At small concentrations generally used, ppm is synonymous with "mg/l" (milligrams per liter).

"Practical Quantitation Level" (PQL) means the required analysis standard for laboratory certification to perform lead and copper analyses. The PQL for lead is .005 milligrams per liter and the PQL for copper is 0.050 milligrams per liter.

"Presedimentation" is a preliminary treatment process used to remove gravel, sand and other particulate material from the source water through settling before the water enters the primary clarification and filtration processes in a treatment plant.

"Primary Disinfection" means the adding of an acceptable primary disinfectant or ultraviolet light irradiation during the treatment process to provide adequate levels of inactivation of bacteria and pathogens. The effectiveness is measured through "CT" values, and the "Total Inactivation Ratio," and the ultraviolet light dose. Acceptable primary disinfectants are, chlorine, ozone, ultraviolet light, and chlorine dioxide (see also "CT" and "CT_{99.9}").

"Principal Forgiveness" means a loan wherein a portion of the loan amount is "forgiven" upon closing the loan. The terms for principal forgiveness will be as directed by R309-705-8, and by the Board.

"Project Costs" include the cost of acquiring and constructing any drinking water project including, without limitation: the cost of acquisition and construction of any facility or any modification, improvement, or extension of such facility; any cost incident to the acquisition of any necessary property, easement or right of way; engineering or architectural fees, legal fees, fiscal agent's and financial advisors' fees; any cost incurred for any preliminary planning to determine the economic and engineering feasibility of a proposed project; costs of economic investigations and studies, surveys, preparation of designs, plans, working drawings, specifications

and the inspection and supervision of the construction of any facility; interest accruing on loans made under this program during acquisition and construction of the project; and any other cost incurred by the political subdivision, the Board or the Department of Environmental Quality, in connection with the issuance of obligation of the political subdivision to evidence any loan made to it under the law.

"Protected aquifer" means a producing aquifer in which the following conditions are met:

(1) A naturally protective layer of clay, at least 30 feet in thickness, is present above the aquifer;

(2) the PWS provides data to indicate the lateral continuity of the clay layer to the extent of zone two; and

(3) the public supply well is grouted with a grout seal that extends from the ground surface down to at least 100 feet below the surface, and for a thickness of at least 30 feet through the protective clay layer.

"Public Drinking Water Project" means construction, addition to, or modification of any facility of a public water system which may affect the quality or quantity of the drinking water (see also section R309-500-6).

"Public Water System" (PWS) means a system, either publicly or privately owned, providing water through constructed conveyances for human consumption and other domestic uses, which has at least 15 service connections or serves an average of at least 25 individuals daily at least 60 days out of the year and includes collection, treatment, storage, or distribution facilities under the control of the operator and used primarily in connection with the system, or collection, pretreatment or storage facilities used primarily in connection with the system but not under his control (see 19-4-102 of the Utah Code Annotated). All public water systems are further categorized into three different types, community (CWS), non-transient non-community (NTNCWS), and transient non-community (TNCWS). These categories are important with respect to required monitoring and water quality testing found in R309-205 and R309-210 (see also definition of "water system").

"Raw Water" means water that is destined for some treatment process that will make it acceptable as drinking water. Common usage of terms such as lake or stream water, surface water or irrigation water are synonymous with raw water.

"Recreational Home Developments" are subdivision type developments wherein the dwellings are not intended as permanent domiciles.

"Recreational Vehicle Park" means any site, tract or parcel of land on which facilities have been developed to provide temporary living quarters for individuals utilizing recreational vehicles. Such a park may be developed or owned by a private, public or non-profit organization catering to the general public or restricted to the organizational or institutional member and their guests only.

"Reference UV Sensors (or Reference Sensors)" are off-line calibrated UV sensors that are used to assess the duty UV sensors' performance and to determine UV sensor uncertainty.

"Regional Operator" means a certified operator who is in direct responsible charge of more than one public drinking water system.

"Regionalized Water System" means any combination of water systems which are physically connected or operated or managed as a single unit.

"Rem" means the unit of dose equivalent from ionizing radiation to the total body or any internal organ or organ system. A "millirem" (mrem) is 1/1000 of a rem.

"Renewal Course" means a course of instruction, approved by the Subcommittee, which is a prerequisite to the renewal of a Backflow Technician's Certificate.

"Repeat compliance period" means any subsequent compliance period after the initial compliance period.

"Replacement well" means a public supply well drilled for the sole purpose of replacing an existing public supply well which is impaired or made useless by structural difficulties and in which the following conditions are met:

(1) the proposed well location shall be within a radius of 150 feet from an existing ground water supply well; and

(2) the PWS provides a copy of the replacement application approved by the State Engineer (refer to Section 73-3-28 of the Utah Code).

"Required Dose" is the UV dose required for a certain level of log inactivation. Required doses are set forth by the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) and R309-215-15(19)(d)(i) Table 215-5 the UV Dose Table.

"Required reserve" means funds set aside to meet requirements set forth in a loan covenant/bond indenture.

"Residual Disinfectant Concentration" ("C" in CT calculations) means the concentration of disinfectant, measured in mg/L, in a representative sample of water.

"Restricted Certificate" means that the operator has qualified by passing an examination but is in a restricted certification status due to lack of experience as an operator.

"Roadway Rest Stop" shall mean any building, or buildings, or grounds, parking areas, including the necessary toilet, hand washing, water supply and wastewater facilities intended for the accommodation of people using such facilities while traveling on public roadways. It does not include scenic view or roadside picnic areas or other parking areas if these are properly identified.

"Routine Chemical Monitoring Violation" means no routine chemical sample(s) was taken as required in R309-205, R309-210 and R309-215.

"Safe Yield" means the annual quantity of water that can be taken from a source of supply over a period of years without depleting the source beyond its ability to be replenished naturally in "wet years".

"Sanitary defect" means a defect that could provide a pathway of entry for microbial contamination into the distribution system or that is indicative of a failure or imminent failure in a barrier that is already in place.

"Sanitary Seal" means a cap that prevents contaminants from entering a well through the top of the casing.

"scfm/sf" means standard cubic foot per minute per square foot and is one way of expressing flowrate of air at standard density through a filter or duct area.

"Seasonal system" means a non-community water system that is not operated as a public water system on a year-round basis and starts up and shuts down at the beginning and end of each operating season. "Secondary Disinfection" means the adding of an acceptable secondary disinfectant to assure that the quality of the water is maintained throughout the distribution system. The effectiveness is measured by maintaining detectable disinfectant residuals throughout the distribution system. Acceptable secondary disinfectants are chlorine, chloramine, and chlorine dioxide.

"Secondary Maximum Contaminant Level" means the advisable maximum level of contaminant in water which is delivered to any user of a public water system.

"Secretary to the Subcommittee" means that individual appointed by the Director to conduct the business of the Subcommittee.

"Sedimentation" means a process for removal of solids before filtration by gravity or separation.

"Semi-Developed Camp" means a campground accessible by any type of vehicular traffic. Facilities are provided for both protection of site and comfort of users. Roads, trails and campsites are defined and basic facilities (water, flush toilets and/or vault toilets, tables, fireplaces or tent pads) are provided. These camps include but are not limited to National Forest campgrounds, Bureau of Reclamation campgrounds, and youth

camps.

"Service Connection" means the constructed conveyance by which a dwelling, commercial or industrial establishment, or other water user obtains water from the supplier's distribution system. Multiple dwelling units such as condominiums or apartments, shall be considered to have a single service connection, if fed by a single line, for the purpose of microbiological repeat sampling; but shall be evaluated by the supplier as multiple "equivalent residential connections" for the purpose of source and storage capacities.

"Service Factor" means a rating on a motor to indicate an increased horsepower capacity beyond nominal nameplate capacity for occasional overload conditions.

"Service line sample" means a one-liter sample of water collected in accordance with R309-210-6(3)(b)(iii), that has been standing for at least 6 hours in a service line.

"Significant deficiencies" means defects in design, operation, or maintenance, or a failure or defects in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that the Director determines to be causing, or have potential for causing, the introduction of contamination into the water delivered to consumers.

"Single family structure" for the purposes of R309-210-6 only, means a building constructed as a single-family residence that is currently used as either a residence or a place of business.

"Small water system" means a public water system that serves 3,300 persons or fewer.

"Specialist" means a person who has successfully passed the written certification exam and meets the required experience, but who is not in direct employment with a Utah public drinking water system.

"Stabilized drawdown" means that there is less than 0.5 foot of change in water level measurements in a pumped well for a minimum period of six hours.

"Standard sample" means the aliquot of finished drinking water that is examined for the presence of coliform bacteria.

"SOCs" means synthetic organic chemicals.

"Stabilized Drawdown" means the drawdown measurements taken during a constant-rate yield and drawdown test as outlined in subsection R309-515-14(10)(b) are constant (no change).

"Stock Tight" means a type of fence that can prevent the passage of grazing livestock through its boundary. An example of such fencing is provided by design drawing 02838-3 titled "Cattle Enclosure" designed by the U.S. Department of the Interior, Bureau of Land Management, Division of Technical Services (copies available from the Division).

"Subcommittee" means the Cross Connection Control Subcommittee.

"Supplier of water" means any person who owns or operates a public water system.

"Surface Water" means all water which is open to the atmosphere and subject to surface runoff (see also section R309-515-5(1)). This includes conveyances such as ditches, canals and aqueducts, as well as natural features.

"Surface Water Systems" means public water systems using surface water or ground water under the direct influence of surface water as a source that are subject to filtration and disinfection (Federal SWTR subpart H) and the requirements of R309-215 "Monitoring and Water Quality: Treatment Plant Monitoring Requirements."

"Surface Water Systems (Large)" means public water systems using surface water or ground water under the direct influence of surface water as a source that are subject to filtration and disinfection and serve a population of 10,000 or greater (Federal SWTR subpart P and L) and the requirements of R309-215 "Monitoring and Water Quality: Treatment Plant Monitoring Requirements."

"Surface Water Systems (Small)" means public water systems using surface water or ground water under the direct influence of surface water as a source that are subject to filtration and disinfection and serve a population less than 10,000 (Federal SWTR subpart L, T and P (sanitary survey requirements)) and the requirements of R309-215 "Monitoring and Water Quality: Treatment Plant Monitoring Requirements."

"Susceptibility" means the potential for a PWS (as determined at the point immediately preceding treatment, or if no treatment is provided, at the entry point to the distribution system) to draw water contaminated above a demonstrated background water quality concentration through any overland or subsurface pathway. Such pathways may include cracks or fissures in or open areas of the surface water intake, and/or the wellhead, and/or the pipe/conveyance between the intake and the water distribution system or treatment.

"SUVA" means Specific Ultraviolet Absorption at 254 nanometers (nm), an indicator of the humic content of water. It is a calculated parameter obtained by dividing a sample's ultraviolet absorption at a wavelength of 254 nm (UV_{254}) (in m^{-1}) by its concentration of dissolved organic carbon (DOC) (in mg/L).

"System with a single service connection" means a system which supplies drinking water to consumers via a single service line.

"T" is short for "Contact Time" and is generally used in conjunction with either the residual disinfectant concentration (C) in determining CT or the velocity gradient (G) in determining mixing energy GT.

"Target Log Inactivation" means the specific log inactivation the PWS wants to achieve for the target pathogen using UV disinfection. The target log inactivation is driven by requirements of the Surface Water Treatment Rule (SWTR), Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR), Interim Enhanced Surface Water Treatment Rule (IESWTR), Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR), and the log removal/inactivation requirements in R309-215-15, and the Groundwater Rule.

"Ten State Standards" refers to the Recommended Standards For Water Works, 1997 by the Great Lakes Upper Mississippi River Board of State Public Health and Environmental Managers available from Health Education Services, A Division of Health Research Inc., P.O. Box 7126, Albany, New York 12224, (518)439-7286.

"Time of travel" means the time required for a particle of water to move in the producing aquifer from a specific point to a ground water source of drinking water. It also means the time required for a particle of water to travel from a specific point along a surface water body to an intake.

"Total Inactivation Ratio" is the sum of all the inactivation ratios calculated for a series of disinfection sequences, and is indicated or shown as: "Summation sign $(CT_{calc})/(CT_{req'd})$." A total inactivation ratio equal to or greater than 1.0 is assumed to provide the required inactivation of Giardia lamblia cysts. $CT_{calc}/CT_{99.9}$ equal to 1.0 provides 99.9 percent (3-log) inactivation, whereas CT_{calc}/CT_{90} equal to 1.0 only provides 90 percent (1-log) inactivation.

"Too numerous to count" (TNTC) means that the total number of bacterial colonies exceeds 200 on a 47 mm diameter membrane filter used for coliform detection.

"Total Organic Carbon" (TOC) means total organic carbon in mg/L measured using heat, oxygen, ultraviolet irradiation, chemical oxidants, or combinations of these oxidants that convert organic carbon to carbon dioxide, rounded to two significant figures.

"Total Trihalomethanes" (TTHM) means the MCL for trihalomethanes. This is the sum of four of ten possible isomers of chlorine/bromine/methane compounds, all known as trihalomethanes (THM). TTHM is defined as the arithmetic

sum of the concentrations in micro grams per liter of only four of these (chloroform, bromodichloromethane, dibromochloromethane, and bromoform) rounded to two significant figures. This measurement is made by samples which are "quenched," meaning that a chlorine neutralizing agent has been added, preventing further THM formation in the samples.

"Training Coordinating Committee" means the voluntary association of individuals responsible for environmental training in the state of Utah.

"Transient Non-Community Water System" (TNCWS) means a non-community public water system that does not serve 25 of the same nonresident persons per day for more than six months per year. Examples of such systems are those, RV park, diner or convenience store where the permanent nonresident staff number less than 25, but the number of people served exceeds 25.

"Treatment Plant" means those facilities capable of providing any treatment to any waterserving a public drinking water system. (Examples would include but not be limited to disinfection, conventional surface water treatment, alternative surface water treatment methods, corrosion control methods, aeration, softening, etc.).

"Treatment Plant Manager" means the individual responsible for all operations of a treatment plant.

"Trihalomethanes" (THM) means any one or all members of this class of organic compounds.

"Trihalomethane Formation Potential" (THMFP) - these samples are collected just following disinfection and measure the highest possible THM value to be expected in the water distribution system. The formation potential is measured by not neutralizing the disinfecting agent at the time of collection, but storing the sample seven days at 25 degrees C prior to analysis. A chlorine residual must be present in these samples at the end of the seven day period prior to analysis for the samples to be considered valid for this test. Samples without a residual at the end of this period must be resampled if this test is desired.

"Turbidity Unit" refers to NTU or Nephelometric Turbidity Unit.

"Two-stage lime softening" is a process in which chemical addition and hardness precipitation occur in each of two distinct unit clarification processes in series prior to filtration.

"UDI" means under direct influence (see also "Ground Water Under the Direct Influence of Surface Water").

"Uncovered finished water storage facility" is a tank, reservoir, or other facility used to store water that will undergo no further treatment to reduce microbial pathogens except residual disinfection and is directly open to the atmosphere.

"Unprotected aquifer" means any aquifer that does not meet the definition of a protected aquifer.

"Unregulated Contaminant" means a known or suspected disease causing contaminant for which no maximum contaminant level has been established.

"Unrestricted Certificate" means that a certificate of competency issued by the Director when the operator has passed the appropriate level written examination and has met all certification requirements at the discipline and grade stated on the certificate.

"UV Dose" means the UV energy per unit area incident on a surface, typically reported in units of mJ/cm^2 or J/m^2 . The UV dose received by a waterborne microorganism in a reactor vessel accounts for the effects on UV intensity of the absorbance of the water, absorbance of the quartz sleeves, reflection and refraction of light from the water surface and reactor walls, and the germicidal effectiveness of the UV wavelengths transmitted. The following terms are related to UV dose:

(1) "Reduction Equivalent Dose (RED)" means the UV dose derived by entering the log inactivation measured during full-scale reactor testing into the UV dose-response curve that

was derived through collimated beam testing. RED values are always specific to the challenge microorganism used during experimental testing and the validation test conditions for full-scale reactor testing.

(2) "Required Dose" means the UV dose in units of mJ/cm^2 needed to achieve the target log inactivation for the target pathogen. The required dose is specified in the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR).

(3) "Validated Dose" means the UV dose in units of mJ/cm^2 delivered by the UV reactor as determined through validation testing. The validated dose is compared to the Required Dose to determine log inactivation credit.

(4) "Calculated Dose" - the RED calculated using the dose-monitoring equation that was developed through validation testing.

"UV Facility" means all of the components of the UV disinfection process, including (but not limited to) UV reactors, control systems, piping, valves, and building (if applicable).

"UV Intensity" means the UV power passing through a unit area perpendicular to the direction of propagation. UV intensity is used to describe the magnitude of UV light measured by UV sensors in a reactor or with a radiometer in bench-scale UV experiments.

"UV Reactor" means the vessel or chamber where exposure to UV light takes place, consisting of UV lamps, quartz sleeves, UV sensors, quartz sleeve cleaning systems, and baffles or other hydraulic controls. The UV reactor also includes additional hardware for monitoring UV dose delivery; typically comprised of (but not limited to): UV sensors and UVT monitors.

"UV Reactor Validation" is experimental testing to determine the operating conditions under which a UV reactor delivers the dose required for inactivation credit of *Cryptosporidium*, *Giardia lamblia*, and viruses.

"UV Transmittance (UVT)" is a measure of the fraction of incident light transmitted through a material (e.g., water sample or quartz). The UVT is usually reported for a wavelength of 254 nm and a pathlength of 1-cm. If an alternate pathlength is used, it should be specified or converted to units of cm^{-1} .

"Validation Factor" - an uncertainty term that accounts for the bias and uncertainty associated with UV validation testing.

"Validated Operating Conditions" - the operating conditions under which the UV reactor is confirmed as delivering the dose required for LT2ESWTR inactivation credit. These operating conditions must include flow rate, UV intensity as measured by a UV sensor, and UV lamp status. The term "Validated Operating Conditions" is also commonly referred to as the "validated range" or the "validated limits."

"Virus" means a virus of fecal origin which is infectious to humans.

"Waterborne Disease Outbreak" means the significant occurrence of acute infectious illness, epidemiologically associated with the ingestion of water from a public water system, as determined by the appropriate local or State agency.

"Watershed" means the topographic boundary that is the perimeter of the catchment basin that contributes water through a surface source to the intake structure. For the purposes of surface water DWSP, if the topographic boundary intersects the state boundary, the state boundary becomes the boundary of the watershed.

"Water Supplier" means a person who owns or operates a public drinking water system.

"Water System" means all lands, property, rights, rights-of-way, easements and related facilities owned by a single entity, which are deemed necessary or convenient to deliver drinking water from source to the service connection of a consumer(s). This includes all water rights acquired in connection with the system, all means of conserving, controlling and distributing drinking water, including, but not limited to, diversion or collection works, springs, wells, treatment plants, pumps, lift

stations, service meters, mains, hydrants, reservoirs, tanks and associated appurtenances within the property or easement boundaries under the control of or controlled by the entity owning the system.

In accordance with R309, certain water systems may be exempted from monitoring requirements, but such exemption does not extend to submittal of plans and specifications for any modifications considered a public drinking water project.

"Wellhead" means the physical structure, facility, or device at the land surface from or through which ground water flows or is pumped from subsurface, water-bearing formations.

"Wholesale system" is a public water system that treats source water as necessary to produce finished water and then delivers some or all of that finished water to another public water system. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems.

"Zone of Influence" corresponds to area of the upper portion of the cone of depression as described in "Groundwater and Wells," second edition, by Fletcher G. Driscoll, Ph.D., and published by Johnson Division, St. Paul, Minnesota.

KEY: drinking water, definitions

May 1, 2016

Notice of Continuation March 13, 2015

19-4-104

R309. Environmental Quality, Drinking Water.
R309-200. Monitoring and Water Quality: Drinking Water Standards.

R309-200-1. Purpose.

The purpose of this rule is to set forth the water quality and drinking water standards for public water systems.

R309-200-2 Authority.

R309-200-3 Definitions.

R309-200-4 General.

R309-200-5 Primary Drinking Water Standards

(1) Inorganic Contaminants

(2) Lead and Copper

(3) Organic Monitoring.

(4) Radiological Chemicals.

(5) Turbidity.

(6) Microbiological quality

(7) Disinfection

R309-200-6 Secondary Drinking Water Standards.

R309-200-7 Treatment Techniques and Unregulated Contaminants.

R309-200-8 Approved Laboratories.

R309-200-2. Authority.

This rule is promulgated by the Drinking Water Board as authorized by Title 19, Environmental Quality Code, Chapter 4, Safe Drinking Water Act, Subsection 104 of the Utah Code and in accordance with 63G-3 of the same, known as the Administrative Rulemaking Act.

R309-200-3. Definitions.

Definitions for certain terms used in this rule are given in R309-110 but may be further clarified herein.

R309-200-4. General.

(1) Maximum contaminant levels (MCLs) and treatment techniques are herein established for those routinely measurable substances which may be found in water supplies. "Primary" standards and treatment techniques are established for the protection of human health. "Secondary" regulations are established to provide guidance in evaluating the aesthetic qualities of drinking water.

(2) The applicable "Primary" standards and treatment techniques shall be met by all public drinking water systems. The "Secondary" standards are recommended levels which should be met in order to avoid consumer complaint.

(3) The methods used to determine compliance with these maximum contaminant levels and treatment techniques are given in R309-205 through R309-215. Analytical techniques which shall be followed in making the required determinations shall be as given in 40 CFR 141 as published on July 1, 2008 by the Office of the Federal Register.

(4) Unless otherwise required by the Director, the effective dates on which new analytical methods shall be initiated are identical to the dates published in 40 CFR 141 on July 1, 2008 by the Office of the Federal Register.

(5) If the water fails to meet these minimum standards, then certain public notification procedures shall be carried out, as outlined in R309-220. Water suppliers shall also keep analytical records in their possession, for a required length of time, as outlined in R309-105-17.

R309-200-5. Primary Drinking Water Standards.

(1) Inorganic Contaminants.

(a) The maximum contaminant levels (MCLs) for antimony, arsenic, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium, sodium, thallium and total dissolved solids are applicable to community and non-transient non-community water systems.

(b) The MCLs for nitrate, nitrite, and total nitrate, nitrite

and sulfate are applicable to community, non-transient non-community, and transient non-community water systems.

(c) The maximum contaminant levels for inorganic chemicals are listed in Table 200-1.

TABLE 200-1
 PRIMARY INORGANIC CONTAMINANTS

Contaminant	Maximum Contaminant Level
1. Antimony	0.006 mg/L
2. Arsenic	0.010 mg/L
3. Asbestos	(see Note 5 below) 7 Million Fibers/liter (longer than 10 um)
4. Barium	2 mg/L
5. Beryllium	0.004 mg/L
6. Cadmium	0.005 mg/L
7. Chromium	0.1 mg/L
8. Cyanide (as free Cyanide)	0.2 mg/L
9. Fluoride	4.0 mg/L
10. Mercury	0.002 mg/L
11. Nickel	--- (see Note 1 below)
12. Nitrate	10 mg/l (as Nitrogen) (see Note 4 below)
13. Nitrite	1 mg/L (as Nitrogen)
14. Total Nitrate and Nitrite	10 mg/L (as Nitrogen)
15. Selenium	0.05 mg/L
16. Sodium	--- (see Note 1 below)
17. Sulfate	1000 mg/L (see Note 2 below)
18. Thallium	0.002 mg/L
19. Total Dissolved Solids	2000 mg/L (see Note 3 below)

NOTE:

(1) No maximum contaminant level has been established for nickel and sodium. However, these contaminant shall be monitored and reported in accordance with the requirements of R309-205-5(3).

(2) If the sulfate level of a public (community, NTNC and non-community) water system is greater than 500 mg/L, the supplier shall satisfactorily demonstrate that:

(a) No better quality water is available, and

(b) The water shall not be available for human consumption from commercial establishments.

In no case shall the Director allow the use of water having a sulfate level greater than 1000 mg/L.

(3) If TDS is greater than 1000 mg/L, the supplier shall satisfactorily demonstrate to the Director that no better water is available. The Director shall not allow the use of an inferior source of water if a better source of water (i.e. lower in TDS) is available.

(4) In the case of a non-community water systems which exceed the MCL for nitrate, the Director may allow, on a case-by-case basis, a nitrate level not to exceed 20 mg/L if the supplier can adequately demonstrate that:

(a) such water will not be available to children under 6 months of age as may be the case in hospitals, schools and day care centers; and

(b) there will be continuous posting of the fact that nitrate levels exceed 10 mg/L and the potential health effect of exposure in accordance with R309-220-12; and

(c) the water is analyzed in conformance to R309-205-5(4); and

(d) that no adverse health effects will result.

(5) The maximum contaminant level for arsenic is 0.05 mg/L until January 23, 2006. The MCL of 0.010 mg/L is effective for the purposes of compliance on January 23, 2006.

(2) Lead and copper.

(a) The lead action level is exceeded if the concentration of lead in more than 10 percent of tap water samples collected during any monitoring period conducted in accordance with R309-210-6(3) is greater than 0.015 mg/L (i.e., if the "90th percentile" lead level is greater than 0.015 mg/L).

(b) The copper action level is exceeded if the concentration of copper in more than 10 percent of tap water samples collected during any monitoring period conducted in accordance with R309-210-6(3) is greater than 1.3 mg/L (i.e., if the "90th percentile" copper level is greater than 1.3 mg/L).

(c) The 90th percentile lead and copper levels shall be computed as follows:

(i) The results of all lead or copper samples taken during a monitoring period shall be placed in ascending order from the sample with the lowest concentration to the sample with the

highest concentration. Each sampling result shall be assigned a number, ascending by single integers beginning with the number 1 for the sample with the lowest contaminant level. The number assigned to the sample with the highest contaminant level shall be equal to the total number of samples taken.

(ii) The number of samples taken during the monitoring period shall be multiplied by 0.9.

(iii) The contaminant concentration in the numbered sample yielded by the calculation in paragraph (c)(ii) above is the 90th percentile contaminant level.

(iv) For water systems serving fewer than 100 people that collect 5 samples per monitoring period, the 90th percentile is computed by taking the average of the highest and second highest concentrations.

(v) For a public water system that has been allowed by the Director to collect fewer than five samples in accordance with R309-210-6(3)(c), the sample result with the highest concentration is considered the 90th percentile value.

(3) Organic Contaminants.

The following are the maximum contaminant levels for organic chemicals. For the purposes of R309-100 through R309-R309-605, organic chemicals are divided into three categories: Pesticides/PCBs/SOCs, volatile organic contaminants (VOCs) and total trihalomethanes.

(a) Pesticides/PCBs/SOCs - The MCLs for organic contaminants listed in Table 200-2 are applicable to community water systems and non-transient, non-community water systems.

TABLE 200-2
PESTICIDE/PCB/SOC CONTAMINANTS

Contaminant	Maximum Contaminant Level
1. Alachlor	0.002 mg/L
2. Aldicarb	(see Note 1 below)
3. Aldicarb sulfoxide	(see Note 1 below)
4. Aldicarb sulfone	(see Note 1 below)
5. Atrazine	0.003 mg/L
6. Carbofuran	0.04 mg/L
7. Chlordane	0.002 mg/L
8. Dibromochloropropane	0.0002 mg/L
9. 2,4-D	0.07 mg/L
10. Ethylene dibromide	0.00005 mg/L
11. Heptachlor	0.0004 mg/L
12. Heptachlor epoxide	0.0002 mg/L
13. Lindane	0.0002 mg/L
14. Methoxychlor	0.04 mg/L
15. Polychlorinated biphenyls	0.0005 mg/L
16. Pentachlorophenol	0.001 mg/L
17. Toxaphene	0.003 mg/L
18. 2,4,5-TP	0.05 mg/L
19. Benzo(a)pyrene	0.0002 mg/L
20. Dalapon	0.2 mg/L
21. Di(2-ethylhexyl)adipate	0.4 mg/L
22. Di(2-ethylhexyl)phthalate	0.006 mg/L
23. Dinoseb	0.007 mg/L
24. Diquat	0.02 mg/L
25. Endothall	0.1 mg/L
26. Endrin	0.002 mg/L
27. Glyphosate	0.7 mg/L
28. Hexachlorobenzene	0.001 mg/L
29. Hexachlorocyclopentadiene	0.05 mg/L
30. Oxamyl (Vydate)	0.2 mg/L
31. Picloram	0.5 mg/L
32. Simazine	0.004 mg/L
33. 2,3,7,8-TCDD (Dioxin)	0.0000003 mg/L

Note 1: The MCL for this contaminant is under further review, however, this contaminant shall be monitored in accordance with R309-205-6(1).

(b) Volatile organic contaminants - The maximum contaminant levels for organic contaminants listed in Table 200-3 apply to community and non-transient non-community water systems.

TABLE 200-3
VOLATILE ORGANIC CONTAMINANTS

Contaminant	Maximum Contaminant Level
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1. Vinyl chloride	0.002 mg/L
2. Benzene	0.005 mg/L
3. Carbon tetrachloride	0.005 mg/L
4. 1,2-Dichloroethane	0.005 mg/L
5. Trichloroethylene	0.005 mg/L
6. para-Dichlorobenzene	0.075 mg/L
7. 1,1-Dichloroethylene	0.007 mg/L
8. 1,1,1-Trichloroethane	0.2 mg/L
9. cis-1,2-Dichloroethylene	0.07 mg/L
10. 1,2-Dichloropropane	0.005 mg/L
11. Ethylbenzene	0.7 mg/L
12. Monochlorobenzene	0.1 mg/L
13. o-Dichlorobenzene	0.6 mg/L
14. Styrene	0.1 mg/L
15. Tetrachloroethylene	0.005 mg/L
16. Toluene	1 mg/L
17. trans-1,2-Dichloroethylene	0.1 mg/L
18. Xylenes (total)	10 mg/L
19. Dichloromethane	0.005 mg/L
20. 1,2,4-Trichlorobenzene	0.07 mg/L
21. 1,1,2-Trichloroethane	0.005 mg/L

(c) Disinfection Byproducts and Disinfectant Residuals:

(i) Community and Non-transient non-community water systems. Surface Water systems serving 10,000 or more persons shall comply with this section beginning January 1, 2002. Surface water systems serving fewer than 10,000 persons and systems using only ground water not under the direct influence of surface water shall comply with this section beginning January 1, 2004.

(A) Compliance with the disinfection byproduct MCLs listed in Table 200-4 shall be determined by the procedures listed in R309-210-8(6) until the date specified by system size listed in R309-210-10(1)(c) at which time compliance shall be determined utilizing LRAA as specified in R309-210-10(1)(d).

(ii) Transient non-community water systems. Surface water systems serving 10,000 or more persons and using chlorine dioxide as a disinfectant or oxidant shall comply with the chlorine dioxide MRDL beginning January 1, 2002. Surface water systems serving fewer than 10,000 persons and using chlorine dioxide as a disinfectant or oxidant and systems using only ground water not under the direct influence of surface water and using chlorine dioxide as a disinfectant or oxidant shall comply with the chlorine dioxide MRDL beginning January 1, 2004.

(iii) The maximum contaminant levels (MCLs) for disinfection byproducts are listed in Table 200-4.

TABLE 200-4
DISINFECTION BYPRODUCTS

DISINFECTION BYPRODUCT	MCL (mg/L)
Total trihalomethanes (TTHM)	0.080
Haloacetic acids (five) (HAA5)	0.060
Bromate	0.010
Chlorite	1.0

(iv) The maximum residual disinfectant levels (MRDLs) are listed in Table 200-5.

TABLE 200-5
MAXIMUM RESIDUAL DISINFECTANT LEVELS

DISINFECTANT RESIDUAL	MRDL (mg/L)
Chlorine	4.0 (as Cl ₂)
Chloramines	4.0 (as Cl ₂)
Chlorine dioxide	0.8 (as ClO ₂)

(v) Control of Disinfectant Residuals. Notwithstanding the MRDLs listed in Table 200-5, systems may increase residual disinfectant levels in the distribution system of chlorine or chloramines (but not chlorine dioxide) to a level and for a time necessary to protect public health, to address specific microbiological contamination problems caused by circumstances such as, but not limited to, distribution line breaks, storm run-off events, source water contamination events, or cross-connection events.

(vi) A system that is installing GAC or membrane

technology to comply with this section may apply to the Director for an extension of up to 24 months past the dates in paragraph (c)(i) of this section, but not beyond December 31, 2003. In granting the extension, the Director shall set a schedule for compliance and may specify any interim measures that the system shall take. Failure to meet the schedule or interim treatment requirements constitutes a violation of Utah Public Drinking Water Rules.

(4) Radiologic Chemicals.

(a) Compliance dates. Compliance dates for combined radium-226 and -228, gross alpha particle activity, gross beta particle and photon radioactivity, and uranium: Community water systems shall comply with the MCLs listed in paragraphs (b), (c), (d), and (e) of this section beginning December 8, 2003 and compliance shall be determined in accordance with the requirements of this sub-section (4) and R309-205-7. Compliance with reporting requirements for the radionuclides under R309-220 and R309-225 is required on December 8, 2003.

(b) Combined radium-226 and -228. The maximum contaminant level for combined radium-226 and radium-228 is 5 pCi/L. The combined radium-226 and radium-228 value is determined by the addition of the results of the analysis for radium-226 and the analysis for radium-228.

(c) Gross alpha particle activity (excluding radon and uranium). The maximum contaminant level for gross alpha particle activity (including radium-226 but excluding radon and uranium) is 15 pCi/L.

(d) The MCL for beta particle and photon radioactivity.

(i) The average annual concentration of beta particle and photon radioactivity from man-made radionuclides in drinking water shall not produce an annual dose equivalent to the total body or any internal organ greater than 4 millirem/year (mrem/year).

(ii) Except for the radionuclides listed in Table 200-6, the concentration of man-made radionuclides causing 4 mrem total body or organ dose equivalents shall be calculated on the basis of 2 liters per day drinking water intake using the 168 hour data list in "Maximum Permissible Body Burdens and Maximum Permissible Concentrations of Radionuclides in Air and in Water for Occupational Exposure," NBS (National Bureau of Standards) Handbook 69 as amended August 1963, U.S. Department of Commerce. Copies of this document are available from the National Technical Information Service, NTIS ADA 280 282, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161. The toll-free number is 800-553-6847. Copies may be inspected at the Division of Drinking Water offices. If two or more radionuclides are present, the sum of their annual dose equivalent to the total body or to any organ shall not exceed 4 mrem/year.

TABLE 200-6
MAN-MADE RADIONUCLIDE CONTAMINANTS

Average Annual Concentrations Assumed to Produce:
A Total Body or Organ Dose of 4 mrem/yr

Radionuclide	Critical organ	pCi per liter
Tritium	Total body	20,000
Strontium-90	Bone Marrow	8

(e) The MCL for uranium. The maximum contaminant level for uranium is 30 ug/L.

(5) TURBIDITY

(a) All public water systems using surface water or ground water under the direct influence of surface water shall provide treatment consisting of both disinfection, as specified in R309-200-5(7)(a), and filtration treatment which complies with the requirements of paragraph (i), (ii) or (iii) of this section.

(i) Conventional filtration treatment or direct filtration.

(A) For systems using conventional filtration or direct

filtration, the turbidity level of representative samples of a system's combined filtered effluent water shall be less than or equal to 0.3 NTU in at least 95 percent of the measurements taken each month, measured as specified in R309-200-4(3) and R309-215-9.

(B) The turbidity level of representative samples of a system's combined filtered effluent water shall at no time exceed 1 NTU, measured as specified in R309-200-4(3) and R309-215-9.

(C) A system that uses lime softening may acidify representative samples prior to analysis using a protocol approved by the Director.

(ii) Filtration technologies other than conventional filtration treatment, direct filtration, slow sand filtration, or diatomaceous earth filtration. A public water system may use a filtration technology not listed in paragraph (i) or (iii) of this section if it demonstrates to the Director, using pilot plant studies or other means, that the alternative filtration technology, in combination with disinfection treatment that meets the requirements of R309-200-7, consistently achieves 99.9 percent removal and/or inactivation of Giardia lamblia cysts and 99.99 percent removal and/or inactivation of viruses, and 99 percent removal of Cryptosporidium oocysts, and the Director approves the use of the filtration technology. For each approval, the Director will set turbidity performance requirements that the system shall meet at least 95 percent of the time and that the system may not exceed at any time at a level that consistently achieves 99.9 percent removal and/or inactivation of Giardia lamblia cysts, 99.99 percent removal and/or inactivation of viruses, and 99 percent removal of Cryptosporidium oocysts. The turbidity level of representative samples shall at no time exceed 5.0 NTU for any treatment technique, measured as specified in R309-215-9(1)(c) and (d)

(iii) The turbidity limit for slow sand filtration and diatomaceous earth filtration shall be less than or equal to 1.0 NTU in at least 95 percent of the measurements taken each month, measured as specified in R309-215-9(1)(c) and (d). For slow sand filtration only, if the Director determines that the system is capable of achieving 99.9 percent removal and inactivation of Giardia lamblia cysts at some turbidity level higher than 1.0 NTU in at least 95 percent of the measurements, the Director may substitute this higher turbidity limit for that system. The turbidity level of representative samples shall at no time exceed 5.0 NTU for any treatment technique, measured as specified in R309-215-9(1)(c) and (d).

(c) Ground water sources not under the direct influence of surface water:

(i) The following turbidity limit applies to community water systems only.

(ii) The limit for turbidity in drinking water from ground water sources not under the direct influence of surface sources is 5.0 NTU based on an average for two consecutive days pursuant to R309-205-8(3).

(6) MICROBIOLOGICAL QUALITY

(a) The maximum contaminant level (MCL) for microbiological contaminants for all public water systems is:

(i) For a system that collects at least 40 samples per month, if no more than 5.0 percent of the samples collected during a month are total coliform-positive, the system is in compliance with the MCL for total coliforms.

(ii) For a system that collects fewer than 40 samples per month, if no more than one sample collected during a month is total coliform-positive, the system is in compliance with the MCL for total coliforms.

(b) A system is in compliance with the MCL for E. coli for samples taken under the provisions of R309-211 unless any of the conditions identified in paragraphs (b)(i) through (b)(iv) of this section occur. For purposes of the public notification requirements in R309-220, violation of the MCL may pose an

acute risk to health.

(i) The system has an E. coli-positive repeat sample following a total coliform-positive routine sample.

(ii) The system has a total coliform-positive repeat sample following an E. coli-positive routine sample.

(iii) The system fails to take all required repeat samples following an E. coli-positive routine sample.

(iv) The system fails to test for E. coli when any repeat sample tests positive for total coliform.

(c) A public water system must determine compliance with the MCL for E. coli in paragraph (b) of this section for each month in which it is required to monitor for total coliforms.

(7) DISINFECTION

Continuous disinfection is recommended for all water sources. It shall be required of all ground water sources which do not consistently meet standards of bacteriologic quality. Surface water sources or ground water sources under direct influence of surface water shall be disinfected and continuously monitored for disinfection residual during the course of required conventional complete treatment for systems serving greater than 3,300 people. Disinfection shall not be considered a substitute for inadequate collection or filtration facilities.

Successful disinfection assures 99.9 percent inactivation of Giardia lamblia cysts and 99.99 percent inactivation of enteric viruses. Both filtration and disinfection are considered treatment techniques to protect against the potential adverse health effects of exposure to Giardia lamblia, viruses, Legionella, and heterotrophic bacteria in water. Minimum disinfection levels are set by "CT" values as defined in R309-110.

(a) Each public water system that provides filtration treatment shall provide disinfection treatment as follows:

(i) The disinfection treatment shall be sufficient to ensure that the total treatment processes of the system achieve at least 99.9 percent (3-log) inactivation and/or removal of Giardia lamblia cysts and at least 99.99 percent (4-log) inactivation and/or removal of viruses, as determined by the Director.

(ii) The residual disinfectant concentration in the water entering the distribution system cannot be less than 0.2 mg/L for more than 4 hours.

(iii) The residual disinfectant concentration in the distribution system, measured as combined chlorine or chlorine dioxide, cannot be undetectable in more than 5 percent of the samples each month, for any two consecutive months that the system serves water to the public. Water in the distribution system with a heterotrophic bacteria concentration less than or equal to 500/ml, measured as heterotrophic plate count (HPC) is deemed to have a detectable disinfectant residual for purposes of determining compliance with this requirement. Thus, the value "V" in the following formula cannot exceed 5 percent in one month, for any two consecutive months.

$$V = ((c + d + e) / (a + b)) \times 100 \text{ where:}$$

a = number of instances where the residual disinfectant concentration is measured;

b = number of instances where the residual disinfectant concentration is not measured but heterotrophic bacteria plate count (HPC) is measured;

c = number of instances where the residual disinfectant concentration is measured but not detected and no HPC is measured;

d = number of instances where no residual disinfectant concentration is detected and where HPC is greater than 500/ml;

e = number of instances where the residual disinfectant concentration is not measured and HPC is greater than 500/ml.

(b) If the Director determines, based on site-specific considerations, that a system has no means for having a sample transported and analyzed for HPC by a certified laboratory under the requisite time and temperature conditions specified in Heterotrophic Plate Count (Pour Plate Method) as set forth in

the latest edition of Standard Methods for the Examination of Water and Wastewater, 1985, American Public Health Association et al. (Method 907A in the 16th edition) and that the system is providing adequate disinfection in the distribution system, the requirements of R309-200-5(7)(a)(iii) do not apply.

(c) If a system utilizes a combination of sources, some surface water influenced (requiring filtration and disinfection treatment) and others deemed ground water (not requiring any treatment, even disinfection), the Director may, based on site-specific considerations, allow sampling for residual disinfectant or HPC at locations other than those specified by total coliform monitoring required by R309-211.

R309-200-6. Secondary Drinking Water Standards for Community, Non-Transient Non-Community and Transient Non-Community Water.

The Secondary Maximum Contaminant Levels for public water systems deals with substances which affect the aesthetic quality of drinking water. They are presented here as recommended limits or ranges and are not grounds for rejection. The taste of water may be unpleasant and the usefulness of the water may be impaired if these standards are significantly exceeded.

TABLE 200-7
SECONDARY INORGANIC CONTAMINANTS

Contaminant	Level
Aluminum	0.05 to 0.2 mg/L
Chloride	250 mg/L
Color	15 Color Units
Copper	1 mg/L
Corrosivity	Non-corrosive
Fluoride	2.0 mg/L (see Note below)
Foaming Agents	0.5 mg/L
Iron	0.3 mg/L
Manganese	0.05 mg/L
Odor	3 Threshold Odor Number
pH	6.5-8.5
Silver	0.1 mg/L
Sulfate	250 mg/L (see Note below)
TDS	500 mg/L (see Note below)
Zinc	5 mg/L

Note: Maximum allowable Fluoride, TDS and Sulfate levels are given in the Primary Drinking Water Standards, R309-200-5(1). They are listed as secondary standards because levels in excess of these recommended levels will likely cause consumer complaint.

R309-200-7. Treatment Techniques and Unregulated Contaminants.

(1) The Board has determined that the minimum level of treatment as described in R309-525 and R309-530 herein or its equivalent is required for surface water sources and ground water contaminated by surface sources.

(2) For all public water systems which use surface water or ground water under the direct influence of surface water, R309-200, 215, 505, 510, 520, 525 and 530 establish or extend treatment technique requirements in lieu of maximum contaminant levels for the following contaminants: Giardia lamblia, viruses, heterotrophic plate count bacteria, Legionella, Cryptosporidium, and turbidity. The treatment technique requirements consist of installing and properly operating water treatment processes which reliably achieve:

(a) at least 99.9 percent (3-log) removal and/or inactivation of Giardia lamblia cysts between a point where the raw water is not subject to re-contamination by surface water runoff and a point downstream before or at the first customer;

(b) at least 99.99 percent (4-log) removal and/or inactivation of viruses between a point where the raw water is not subject to re-contamination by surface water runoff and a point downstream before or at the first customer.

(c) At least 99 percent (2-log) removal of Cryptosporidium

between a point where the raw water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer.

(d) Compliance with the profiling and benchmark requirements under the provisions of R309-215-14.

(3) No MCLs are established herein for unregulated contaminants; viruses, protozoans and other chemical and biological substances. Some unregulated contaminants shall be monitored for in accordance with 40 CFR 141.40.

R309-200-8. Approved Laboratories.

(1) For the purpose of determining compliance, samples may be considered only if they have been analyzed by the State of Utah primacy laboratory or a laboratory certified by the Utah State Health Laboratory. However, measurements for pH, temperature, turbidity and disinfectant residual, daily chlorite, TOC, UV254, DOC and SUVA may, under the direction of the direct responsible charge operator, be performed by any water supplier or their representative.

(2) All samples shall be marked either: routine, repeat, check or investigative before submission of such samples to a certified lab. Routine, repeat, and check samples shall be considered compliance purposes samples.

(3) All public water systems shall either: contract with a certified laboratory to have the laboratory send all compliance purposes sample results, with the exception of Lead/Copper data, to the Division of Drinking Water, or shall inform the Division of Drinking Water that they intend to forward all compliance purposes samples to the Division. Each public water system shall furnish the Division of Drinking Water a copy of the contract with their certified laboratory or inform the Division in writing of the public water system's intent to forward the data to the Division.

(4) All sample results can be sent either electronically or in hard copy form.

KEY: drinking water, quality standards, regulated contaminants

May 1, 2016

19-4-104

Notice of Continuation March 13, 2015

R309. Environmental Quality, Drinking Water.
R309-210. Monitoring and Water Quality: Distribution System Monitoring Requirements.

R309-210-1. Purpose.

The purpose of this rule is to outline the monitoring requirements for public water systems with regard to their distribution systems.

R309-210-2. Authority.

R309-210-3. Definitions.

R309-210-4. General distribution system monitoring requirements.

R309-210-5. Microbiological Monitoring.

R309-210-6. Lead and Copper Monitoring.

R309-210-7. Asbestos Distribution System Monitoring.

R309-210-8. Disinfection Byproducts - Stage 1 Requirements.

R309-210-9. Disinfection Byproducts - Initial Distribution System Evaluations (IDSE).

R309-210-10. Disinfection Byproducts - Stage 2 Requirements.

R309-210-2. Authority.

This rule is promulgated by the Drinking Water Board as authorized by Title 19, Environmental Quality Code, Chapter 4, Safe Drinking Water Act, Subsection 104 of the Utah Code and in accordance with 63G-3 of the same, known as the Administrative Rulemaking Act.

R309-210-3. Definitions.

Definitions for certain terms used in this rule are given in R309-110 but may be further clarified herein.

R309-210-4. General.

(1) All public water systems are required to monitor their water to determine if they comply with the requirements for water quality stated in R309-200. In exceptional circumstances the Director may modify the monitoring requirements given herein as is deemed appropriate.

(2) The Director may determine compliance or initiate compliance actions based upon analytical results and other information compiled by authorized representatives.

(3) If the water fails to meet minimum standards, then certain public notification procedures must be carried out, as outlined in R309-220. Water suppliers must also keep analytical records in their possession, for a required length of time, as outlined in R309-105-17.

(4) All samples shall be taken at representative sites as specified herein for each contaminant or group of contaminants.

(5) For the purpose of determining compliance, samples may only be considered if they have been analyzed by the State of Utah primacy laboratory or a laboratory certified by the Utah State Health Laboratory.

(6) Measurements for pH, temperature, turbidity and disinfectant residual may, under the direction of the direct responsible operator, be performed by any water supplier or their representative.

(7) All samples must be marked either: routine, repeat, check or investigative before submission of such samples to a certified laboratory. Routine, repeat, and check samples shall be considered compliance purpose samples.

(8) All sample results can be sent to the Division of Drinking Water either electronically or in hard copy form.

(9) Unless otherwise required by the Director, the effective dates on which required monitoring shall be initiated are identical to the dates published in 40 CFR 141 on July 1, 2001 by the Office of the Federal Register.

(10) Exemptions from monitoring requirements shall only be granted in accordance with R309-105-5.

R309-210-6. Lead and Copper Monitoring.

(1) General requirements.

(a) Applicability and effective dates

(i) The requirements of R309-210-6, unless otherwise indicated, apply to community water systems and non-transient non-community water systems (hereinafter referred to as water systems or systems).

(b) R309-210-6 establishes a treatment technique that includes requirements for corrosion control treatment, source water treatment, lead service line replacement, and public education. These requirements are triggered, in some cases, by lead and copper action levels measured in samples collected at consumers' taps.

(c) Corrosion control treatment requirements

(i) All water systems shall install and operate optimal corrosion control treatment. However, any water system that complies with the applicable corrosion control treatment requirements specified by the Director under R309-210-6(2) and R309-210-6(4)(a) shall be deemed in compliance with this treatment requirement.

(d) Source water treatment requirements

Any system exceeding the lead or copper action level shall implement all applicable source water treatment requirements specified by the Director under R309-210-6(4)(b).

(e) Lead service line replacement requirements

Any system exceeding the lead action level after implementation of applicable corrosion control and source water treatment requirements shall complete the lead service line replacement requirements contained in R309-210-6(4)(c).

(f) Public education requirements

Pursuant to R309-210-6(7), all water systems must provide a consumer notice of lead tap water monitoring results to persons served at the sites (taps) that are tested. Any system exceeding the lead action level shall implement the public education requirements.

(g) Monitoring and analytical requirements

Tap water monitoring for lead and copper, monitoring for water quality parameters, source water monitoring for lead and copper, and analyses of the monitoring results shall be completed in compliance with R309-210-6(3), R309-210-6(5), R309-210-6(6) and R309-200-8.

(h) Reporting requirements

Systems shall report to the Director any information required by the treatment provisions of this subpart and R309-210-6(8).

(i) Recordkeeping requirements

Systems shall maintain records in accordance with R309-105-17(2).

(j) Violation of primary drinking water rules

Failure to comply with the applicable requirements of R309-210-6, including requirements established by the Director pursuant to these provisions, shall constitute a violation of the primary drinking water regulations for lead and/or copper.

(2) Applicability of corrosion control treatment steps to small, medium-size and large water systems.

(a) Systems shall complete the applicable corrosion control treatment requirements described in R309-210-6(4)(a) by the deadlines established in this section.

(i) A large system (serving greater than 50,000 persons) shall complete the corrosion control treatment steps specified in R309-210-6(2)(d), unless it is deemed to have optimized corrosion control under R309-210-6(2)(b)(ii) or (b)(iii).

(ii) A small system (serving less than 3300 persons) and a medium-size system (serving greater than 3,300 and less than 50,000 persons) shall complete the corrosion control treatment steps specified in R309-210-6(2)(e), unless it is deemed to have optimized corrosion control under R309-210-6(2)(b)(i), (b)(ii), or (b)(iii).

(b) A system is deemed to have optimized corrosion

control and is not required to complete the applicable corrosion control treatment steps identified in this section if the system satisfies one of the criteria in paragraphs (b)(i) through (b)(iii) of this section. Any such system deemed to have optimized corrosion control under this paragraph, and which has treatment in place, shall continue to operate and maintain optimal corrosion control treatment and meet any requirements that the Director determines appropriate to ensure optimal corrosion control treatment is maintained.

(i) A small or medium-size water system is deemed to have optimized corrosion control if the system meets the lead and copper action levels during each of two consecutive six-month monitoring periods conducted in accordance with R309-210-6(3).

(ii) Any water system may be deemed by the Director to have optimized corrosion control treatment if the system demonstrates to the satisfaction of the Director that it has conducted activities equivalent to the corrosion control steps applicable to such system under this section. If the Director makes this determination, it shall provide the system with written notice explaining the basis for its decision and shall specify the water quality control parameters representing optimal corrosion control in accordance with R309-210-6(4)(a)(vi). Water systems deemed to have optimized corrosion control under this paragraph shall operate in compliance with the Director designated optimal water quality control parameters in accordance with R309-210-6(4)(a)(vii) and continue to conduct lead and copper tap and water quality parameter sampling in accordance with R309-210-6(3)(d)(iii) and R309-210-6(5)(d), respectively. A system shall provide the Director with the following information in order to support a determination under this paragraph:

(A) the results of all test samples collected for each of the water quality parameters in R309-210-6(4)(a)(iii)(C).

(B) a report explaining the test methods used by the water system to evaluate the corrosion control treatments listed in R309-210-6(4)(a)(iii)(A), the results of all tests conducted, and the basis for the system's selection of optimal corrosion control treatment;

(C) a report explaining how corrosion control has been installed and how it is being maintained to insure minimal lead and copper concentrations at consumers' taps; and

(D) the results of tap water samples collected in accordance with R309-210-6(3) at least once every six months for one year after corrosion control has been installed.

(iii) Any water system is deemed to have optimized corrosion control if it submits results of tap water monitoring conducted in accordance with R309-210-6(3) and source water monitoring conducted in accordance with R309-210-6(6) that demonstrates for two consecutive six-month monitoring periods that the difference between the 90th percentile tap water lead level computed under R309-200-5(2)(c), and the highest source water lead concentration, is less than the Practical Quantitation Level (PQL) for lead as specified in R309-104-8.

(A) Those systems whose highest source water lead level is below the Method Detection Limit may also be deemed to have optimized corrosion control under this paragraph if the 90th percentile tap water lead level is less than or equal to the Practical Quantitation Level for lead for two consecutive 6-month monitoring periods.

(B) Any water system deemed to have optimized corrosion control in accordance with this paragraph shall continue monitoring for lead and copper at the tap no less frequently than once every three calendar years using the reduced number of sites specified in R309-210-6(3)(c) and collecting the samples at times and locations specified in R309-210-6(3)(d)(iv)(D). Any such system that has not conducted a round of monitoring pursuant to R309-210-6(3)(d) since September 30, 1997, shall complete a round of monitoring pursuant to this paragraph no

later than September 30, 2000.

(C) Any water system deemed to have optimized corrosion control pursuant to this paragraph shall notify the Director in writing pursuant to R309-210-6(8)(a)(iii) of any upcoming long-term change in treatment or addition of a new source as described in that section. The Director must review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water system. The Director may require any such system to conduct additional monitoring or to take other action the Director deems appropriate to ensure that such systems maintain minimal levels of corrosion in the distribution system.

(D) As of July 12, 2001, a system is not deemed to have optimized corrosion control under this paragraph, and shall implement corrosion control treatment pursuant to paragraph (b)(iii)(E) of this section unless it meets the copper action level.

(E) Any system triggered into corrosion control because it is no longer deemed to have optimized corrosion control under this paragraph shall implement corrosion control treatment in accordance with the deadlines in paragraph (e) of this section. Any such large system shall adhere to the schedule specified in that paragraph for medium-size systems, with the time periods for completing each step being triggered by the date the system is no longer deemed to have optimized corrosion control under this paragraph.

(c) Any small or medium-size water system that is required to complete the corrosion control steps due to its exceedance of the lead or copper action level may cease completing the treatment steps whenever the system meets both action levels during each of two consecutive monitoring periods conducted pursuant to R309-210-6(3) and submits the results to the Director. If any such water system thereafter exceeds the lead or copper action level during any monitoring period, the system (or the Director, as the case may be) shall recommence completion of the applicable treatment steps, beginning with the first treatment step which was not previously completed in its entirety. The Director may require a system to repeat treatment steps previously completed by the system where the Director determines that this is necessary to implement properly the treatment requirements of this section. The Director shall notify the system in writing of such a determination and explain the basis for its decision. The requirement for any small or medium size system to implement corrosion control treatment steps in accordance with paragraph (e) of this section (including systems deemed to have optimized corrosion control under paragraph (b)(i) of this section) is triggered whenever any small or medium size system exceeds the lead or copper action level.

(d) Treatment steps and deadlines for large systems

Except as provided in R309-210-6(2)(b)(ii) and (b)(iii), large systems shall complete the following corrosion control treatment steps by the indicated dates.

(i) Step 1: The system shall conduct initial monitoring (R309-210-6(3)(d)(i) and R309-210-6(5)(b)) during two consecutive six-month monitoring periods by January 1, 1993.

(ii) Step 2: The system shall complete corrosion control studies (R309-210-6(4)(a)(iii)) by July 1, 1994.

(iii) Step 3: The Director shall designate optimal corrosion control treatment (R309-210-6(4)(a)(iv)) by January 1, 1995.

(iv) Step 4: The system shall install optimal corrosion control treatment (R309-210-6(4)(a)(v)) by January 1, 1997.

(v) Step 5: The system shall complete follow-up sampling (R309-210-6(3)(d)(ii) and R309-210-6(5)(c)) by January 1, 1998.

(vi) Step 6: The Director shall review installation of treatment and designate optimal water quality control parameters (R309-210-6(4)(a)(vi)) by July 1, 1998.

(vii) Step 7: The system shall operate in compliance with the Director specified optimal water quality control parameters

(R309-210-6(4)(a)(vii)) and continue to conduct tap sampling (R309-210-6(3)(d)(iii) and R309-210-6(5)(d)).

(e) Treatment steps and deadlines for small and medium-size systems

Except as provided in R309-210-6(2)(b), small and medium-size systems shall complete the following corrosion control treatment steps by the indicated time periods.

(i) Step 1: The system shall conduct initial tap sampling (R309-210-6(3)(d)(i) and R309-210-6(5)(b) until the system either exceeds the lead or copper action level or becomes eligible for reduced monitoring under R309-210-6(3)(d)(iv). A system exceeding the lead or copper action level shall recommend optimal corrosion control treatment (R309-210-6(4)(a)) within six months after the end of the monitoring period during which it exceeds one of the action levels.

(ii) Step 2: Within 12 months after the end of the monitoring period during which a system exceeds the lead or copper action level, the Director may require the system to perform corrosion control studies (R309-210-6(4)(b)). If the Director does not require the system to perform such studies, the Director shall specify optimal corrosion control treatment (R309-210-6(4)(a)(iv)) within the following time-frames:

(A) for medium-size systems, within 18 months after the end of the monitoring period during which such system exceeds the lead or copper action level,

(B) for small systems, within 24 months after the end of the monitoring period during which such system exceeds the lead or copper action level.

(iii) Step 3: If the Director requires a system to perform corrosion control studies under step 2, the system shall complete the studies (R309-210-6(4)(a)(iii)) within 18 months after the Director requires that such studies be conducted.

(iv) Step 4: If the system has performed corrosion control studies under step 2, the Director shall designate optimal corrosion control treatment (R309-210-6(4)(a)(iv)) within 6 months after completion of step 3.

(v) Step 5: The system shall install optimal corrosion control treatment (R309-210-6(4)(a)(v)) within 24 months after the Director designates such treatment.

(vi) Step 6: The system shall complete follow-up sampling (R309-210-6(3)(d)(ii) and R309-210-6(5)(c)) within 36 months after the Director designates optimal corrosion control treatment.

(vii) Step 7: The Director shall review the system's installation of treatment and designate optimal water quality control parameters (R309-210-6(4)(a)(vi)) within 6 months after completion of step 6.

(viii) Step 8: The system shall operate in compliance with the Director-designated optimal water quality control parameters (R309-210-6(4)(a)(vii)) and continue to conduct tap sampling (R309-210-6(3)(d)(iii) and R309-210-6(5)(d)).

(3) Monitoring requirements for lead and copper in tap water.

(a) Sample site location

(i) By the applicable date for commencement of monitoring under R309-210-6(3)(d)(i), each water system shall complete a materials evaluation of its distribution system in order to identify a pool of targeted sampling sites that meets the requirements of this section, and which is sufficiently large to ensure that the water system can collect the number of lead and copper tap samples required in R309-210-6(3)(c). All sites from which first draw samples are collected shall be selected from this pool of targeted sampling sites. Sampling sites may not include faucets that have point-of-use or point-of-entry treatment devices designed to remove inorganic contaminants.

(ii) A water system shall use the information on lead, copper, and galvanized steel when conducting a materials evaluation. When an evaluation of this information is insufficient to locate the requisite number of lead and copper

sampling sites that meet the targeting criteria in R309-210-6(3)(a), the water system shall review the sources of information listed below in order to identify a sufficient number of sampling sites. In addition, the system shall seek to collect such information where possible in the course of its normal operations (e.g., checking service line materials when reading water meters or performing maintenance activities):

(A) all plumbing codes, permits, and records in the files of the building department(s) which indicate the plumbing materials that are installed within publicly and privately owned structures connected to the distribution system;

(B) all inspections and records of the distribution system that indicate the material composition of the service connections that connect a structure to the distribution system; and

(C) all existing water quality information, which includes the results of all prior analyses of the system or individual structures connected to the system, indicating locations that may be particularly susceptible to high lead or copper concentrations.

(iii) The sampling sites selected for a community water system's sampling pool ("tier 1 sampling sites") shall consist of single family structures that:

(A) contain copper pipes with lead solder installed after 1982 or contain lead pipes; and/or

(B) are served by a lead service line.

When multiple-family residences comprise at least 20 percent of the structures served by a water system, the system may include these types of structures in its sampling pool.

(iv) Any community water system with insufficient tier 1 sampling sites shall complete its sampling pool with "tier 2 sampling sites", consisting of buildings, including multiple-family residences that:

(A) contain copper pipes with lead solder installed after 1982 or contain lead pipes; and/or

(B) are served by a lead service line.

(v) Any community water system with insufficient tier 1 and tier 2 sampling sites shall complete its sampling pool with "tier 3 sampling sites", consisting of single family structures that contain copper pipes with lead solder installed before 1983. A community water system with insufficient tier 1, tier 2 and tier 3 sampling sites shall complete its sampling pool with representative sites throughout the distribution system. For the purpose of this paragraph, a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the water system.

(vi) The sampling sites selected for a non-transient non-community water system ("tier 1 sampling sites") shall consist of buildings that:

(A) contain copper pipes with lead solder installed after 1982 or contain lead pipes; and/or

(B) are served by a lead service line.

(vii) A non-transient non-community water system with insufficient tier 1 sites that meet the targeting criteria in R309-210-6(3)(a)(vi) shall complete its sampling pool with sampling sites that contain copper pipes with lead solder installed before 1983. If additional sites are needed to complete its sampling pool, the non-transient non-community water system shall use representative sites throughout the distribution system. For the purpose of this paragraph, a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the water system.

(viii) Any water system whose distribution system contains lead service lines shall draw 50 percent of the samples it collects during each monitoring period from sites that contain lead pipes, or copper pipes with lead solder, and 50 percent of the samples from sites served by a lead service line. A water system that cannot identify a sufficient number of sampling sites served by a lead service line shall collect first draw samples from all of the sites identified as being served by such lines.

(b) Sample collection methods

(i) All tap samples for lead and copper collected in accordance with this section, with the exception of lead service line samples collected under R309-210-6(4)(c)(iii) and samples collected under (b)(v) of this section, shall be first draw samples.

(ii) Each first-draw tap sample for lead and copper shall be one liter in volume and have stood motionless in the plumbing system of each sampling site for at least six hours. First draw samples from residential housing shall be collected from the cold water kitchen tap or bathroom sink tap. First-draw samples from a nonresidential building shall be one liter in volume and shall be collected at an interior tap from which water is typically drawn for consumption. Non-first-draw samples collected in lieu of first-draw samples pursuant to paragraph (b)(v) of this section shall be one liter in volume and shall be collected at an interior tap from which water is typically drawn for consumption. First draw samples may be collected by the system or the system may allow residents to collect first draw samples after instructing the residents of the sampling procedures specified in this paragraph. To avoid problems with residents handling nitric acid, acidification of first draw samples may be done up to fourteen days after the sample is collected. After acidification to resolubilize the metals, the sample must stand in the original container for the time specified in R309-200-4(3). If a system allows residents to perform sampling, the system may not challenge, based on alleged errors in sample collection, the accuracy of sampling results.

(iii) Each service line sample shall be one liter in volume and have stood motionless in the lead service line for at least six hours. Lead service line samples shall be collected in one of the following three ways:

(A) at the tap after flushing the volume of water between the tap and the lead service line. The volume of water shall be calculated based on the interior diameter and length of the pipe between the tap and the lead service line;

(B) tapping directly into the lead service line; or

(C) if the sampling site is a building constructed as a single-family residence, allowing the water to run until there is a significant change in temperature which would be indicative of water that has been standing in the lead service line.

(iv) A water system shall collect each first draw tap sample from the same sampling site from which it collected a previous sample. If, for any reason, the water system cannot gain entry to a sampling site in order to collect a follow-up tap sample, the system may collect the follow-up tap sample from another sampling site in its sampling pool as long as the new site meets the same targeting criteria, and is within reasonable proximity of the original site.

(v) A non-transient non-community water system, or a community water system that meets the criteria for R309-210-6(7)(b)(vii), that does not have enough taps that can supply first draw samples, as defined in R309-110, may apply to the Director in writing to substitute non-first-draw samples. Such systems must collect as many first draw samples from appropriate taps as possible and identify sampling times and locations that would likely result in the longest standing time for the remaining sites. The Director herein waives the requirement for prior Director approval of non-first draw samples sites selected by the system.

(c) Number of samples

Water systems shall collect at least one sample during each monitoring period specified in R309-210-6(3)(d) from the number of sites listed in the first column (standard monitoring) in Table 210-3. A system conducting reduced monitoring under R309-210-6(3)(d)(iv) may collect one sample from the number of sites specified in the second column (reduced monitoring) in Table 210-3 during each monitoring period specified in R309-210-6(3)(d)(iv). Such reduced monitoring sites shall be

representative of the sites required for standard monitoring. A public water system that has fewer than five drinking water taps, that can be used for human consumption meeting the sample site criteria of R309-210-6(6)(a) to reach the required number of sample sites listed in paragraph (c) of this section, must collect at least one sample from each tap and then must collect additional samples from those taps on different days during the monitoring period to meet the required number of sites. Alternatively the Director may allow these public water systems to collect a number of samples less than the number of sites specified in paragraph (c) of this section, provided that 100 percent of all taps that can be used for human consumption are sampled. The Director must approve this reduction of the minimum number of samples in writing based on a request from the system or onsite verification by the Director. The Director may specify sampling locations when a system is conducting reduced monitoring to ensure that fewer number of sampling sites are representative of the risk to public health as outlined in R309-210-6(3)(a).

TABLE 210-3
NUMBER OF LEAD AND COPPER SAMPLING SITES

System Size (# People Served)	# of sites (Standard Monitoring)	# of sites (Reduced Monitoring)
Greater than 100,000	100	50
10,001 to 100,000	60	30
3,301 to 10,000	40	20
501 to 3,300	20	10
101 to 500	10	5
100 or less	5	5

(d) Timing of monitoring

(i) Initial tap sampling

The first six-month monitoring period for small, medium-size and large systems shall begin on the following dates in Table 210-4:

TABLE 210-4
INITIAL LEAD AND COPPER MONITORING PERIODS

System Size (# People Served)	First six-month Monitoring Period Begins On
Greater than 50,000	January 1, 1992
3,301 to 50,000	July 1, 1992
3,300 or less	July 1, 1993

(A) All large systems shall monitor during two consecutive six-month periods.

(B) All small and medium-size systems shall monitor during each six-month monitoring period until:

(I) the system exceeds the lead or copper action level and is therefore required to implement the corrosion control treatment requirements under R309-210-6(2), in which case the system shall continue monitoring in accordance with R309-210-6(3)(d)(ii), or

(II) the system meets the lead and copper action levels during two consecutive six-month monitoring periods, in which case the system may reduce monitoring in accordance with R309-210-6(3)(d)(iv).

(ii) Monitoring after installation of corrosion control and source water treatment

(A) Any large system which installs optimal corrosion control treatment pursuant to R309-210-6(2)(d)(iv) shall monitor during two consecutive six-month monitoring periods by the date specified in R309-210-6(2)(d)(v).

(B) Any small or medium-size system which installs optimal corrosion control treatment pursuant to R309-210-6(2)(e)(v) shall monitor during two consecutive six-month monitoring periods by the date specified in R309-210-6(2)(e)(vi).

(C) Any system which installs source water treatment

pursuant to R309-210-6(4)(b)(i)(C) shall monitor during two consecutive six-month monitoring periods by the date specified in R309-210-6(4)(b)(i)(D).

(iii) Monitoring after Director specifies water quality parameter values for optimal corrosion control

After the Director specifies the values for water quality control parameters under R309-210-6(4)(a)(vi), the system shall monitor during each subsequent six-month monitoring period, with the first monitoring period to begin on the date the Director specifies the optimal values under R309-210-6(4)(a)(vi).

(iv) Reduced monitoring

(A) A small or medium-size water system that meets the lead and copper action levels during each of two consecutive six-month monitoring periods may reduce the number of samples in accordance with R309-210-6(3)(c), Table 210-3, and reduce the frequency of sampling to once per year. A small or medium water system collecting fewer than five samples as specified in paragraph (c) of this section, that meets the lead and copper action levels during each of two consecutive six-month monitoring periods may reduce the frequency of sampling to once per year. In no case can the system reduce the number of samples required below the minimum of one sample per available tap. This sampling shall begin during the calendar year immediately following the end of the second consecutive six-month monitoring period.

(B) Any water system that meets the lead action level and maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the Director under R309-210-6(4)(a)(vi) during each of two consecutive six-month monitoring periods may reduce the frequency of monitoring to once per year and reduce the number of lead and copper samples in accordance with paragraph (c) of this section if it receives written approval from the Director. This sampling shall begin during the calendar year immediately following the end of the second consecutive six-month monitoring period. The Director shall review monitoring, treatment, and other relevant information submitted by the water system in accordance with R309-210-6(8), and shall notify the system in writing when it determines the system is eligible to commence reduced monitoring pursuant to this paragraph. The Director shall review, and where appropriate, revise its determination when the system submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available.

(C) A small or medium-size water system that meets the lead and copper action levels during three consecutive years of monitoring may reduce the frequency of monitoring for lead and copper from annually to once every three years. Any water system that meets the lead action level and maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the Director under R309-210-6(4)(f) during three consecutive years of monitoring may reduce the frequency of monitoring from annually to once every three years if it receives written approval from the Director. Samples collected once every three years shall be collected no later than every third calendar year. The Director shall review monitoring, treatment, and other relevant information submitted by the water system in accordance with R309-210-6(8), and shall notify the system in writing when it determines the system is eligible to reduce the frequency of monitoring to once every three years. The Director shall review, and where appropriate, revise its determination when the system submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available.

(D) A water system that reduces the number and frequency of sampling shall collect these samples from representative sites included in the pool of targeted sampling sites identified in R309-210-6(3)(a). Systems sampling annually or less frequently

shall conduct the lead and copper tap sampling during the months of June, July, August or September unless the Director has approved a different sampling period in accordance with paragraph (d)(iv)(D)(I) of this section.

(I) The Director, at its discretion, may approve a different period for conducting the lead and copper tap sampling for systems collecting a reduced number of samples. Such a period shall be no longer than four consecutive months and must represent a time of normal operation where the highest levels of lead are most likely to occur. For a non-transient non-community water system that does not operate during the months of June through September, and for which the period of normal operation where the highest levels of lead are most likely to occur is not known, the Director shall designate a period that represents a time of normal operation for the system. This sampling shall begin during the period approved or designated by the State in the calendar year immediately following the end of the second consecutive six-month monitoring period for systems initiating annual monitoring and during the three-year period following the end of the third consecutive calendar year of annual monitoring for systems initiating triennial monitoring.

(II) Systems monitoring annually, that have been collecting samples during the months of June through September and that receive Director approval to alter their sample collection period under paragraph (d)(iv)(D)(I) of this section, must collect their next round of samples during a time period that ends no later than 21 months after the previous round of sampling. Systems monitoring triennially that have been collecting samples during the months of June through September, and receive Director approval to alter the sampling collection period as per (d)(iv)(D)(I) of this section, must collect their next round of samples during a time period that ends no later than 45 months after the previous round of sampling. Subsequent rounds of sampling must be collected annually or triennially, as required by this section. Small systems with waivers, granted pursuant to paragraph (g) of this section, that have been collecting samples during the months of June through September and receive Director approval to alter their sample collection period under paragraph (d)(iv)(D)(I) of this section must collect their next round of samples before the end of the 9 year period.

(E) Any water system that demonstrates for two consecutive 6 month monitoring periods that the tap water lead level computed under R309-200-5(2)(c) is less than or equal to 0.005 mg/L and the tap water copper level computed under R309-200-5(2)(c) is less than or equal to 0.65 mg/L may reduce the number of samples in accordance paragraph (c) of this section and reduce the frequency of sampling to once every three calendar years.

(F)(I) A small or medium-size water system subject to reduced monitoring that exceeds the lead or copper action level shall resume sampling in accordance R309-210-6(3)(d)(iii) and collect the number of samples specified for standard monitoring under R309-210-6(3)(c), Table 210-3. Such system shall also conduct water quality parameter monitoring in accordance with R309-210-6(5)(b), (c) or (d) (as appropriate) during the monitoring period in which it exceeded the action level. Any such system may resume annual monitoring for lead and copper at the tap at the reduced number of sites specified in paragraph (c) of this section after it has completed two subsequent consecutive six month rounds of monitoring that meet the criteria of paragraph (d)(iv)(A) of this section or may resume triennial monitoring for lead and copper at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either paragraph (d)(vi)(C) or (d)(iv)(D) of this section.

(II) Any water system subject to the reduced monitoring frequency that fails to meet the lead action level during any four-month monitoring period or that fails to operate at or above

the minimum value or within the range of values for the water quality parameters specified by the Director under R309-210-6(4)(a)(vi) for more than nine days in any six-month period specified in R309-210-6(5)(d) shall conduct tap water sampling for lead and copper at the frequency specified in paragraph (d)(iii) of this section, collect the number of samples specified for standard monitoring under paragraph (c) of this section, and shall resume monitoring for water quality parameters within the distribution system in accordance with R309-210-6(5)(d). This standard tap water sampling shall begin no later than the six-month period beginning January 1 of the calendar year following the lead action level exceedance or water quality parameter excursion. Such a system may resume reduced monitoring for lead and copper at the tap and for water quality parameters within the distribution system under the following conditions:

(aa) The system may resume annual monitoring for lead and copper at the tap at the reduced number of sites specified in paragraph (c) of this section after it has completed two subsequent six month rounds of monitoring that meet the criteria of paragraph (d)(iv)(B) of this section and the system has received written approval from the Director that it is appropriate to resume reduced monitoring on an annual frequency. This sampling shall begin during the calendar year immediately following the end of the second consecutive six-month monitoring period.

(bb) The system may resume triennial monitoring for lead and copper at the tap at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either paragraph (d)(iv)(C) or (d)(iv)(E) of this section and the system has received written approval from the Director that it is appropriate to resume triennial monitoring.

(cc) The system may reduce the number of water quality parameter tap water samples required in accordance with R309-210-6(5)(e)(i) and the frequency with which it collects such samples in accordance with R309-210-6(5)(e)(ii). Such a system may not resume triennial monitoring for water quality parameters at the tap until it demonstrates, in accordance with the requirements of R309-210-6(5)(e)(ii), that it has requalified for triennial monitoring.

(G) Any water system subject to a reduced monitoring frequency under paragraph (d)(iv) of this section shall notify the Director in writing in accordance with R309-210-6(8)(a)(iii) of any upcoming long-term change in treatment or addition of a new source as described in that section. The Director must review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water system. The Director may require the system to resume sampling in accordance with paragraph (d)(iii) of this section and collect the number of samples specified for standard monitoring under paragraph (c) of this section or take other appropriate steps such as increased water quality parameter monitoring or re-evaluation of its corrosion control treatment given the potentially different water quality considerations.

(e) Additional monitoring by systems

The results of any monitoring conducted in addition to the minimum requirements of this section shall be considered by the system and the Director in making any determinations (i.e., calculating the 90th percentile lead or copper level).

(f) Invalidation of lead or copper tap water samples. A sample invalidated under this paragraph does not count toward determining lead or copper 90th percentile levels under Sec. 141.80 (c) (3) or toward meeting the minimum monitoring requirements of paragraph (c) of this section.

(i) The Director may invalidate a lead or copper tap water sample at least if one of the following conditions is met.

(A) The laboratory establishes that improper sample analysis caused erroneous results.

(B) The Director determines that the sample was taken

from a site that did not meet the site selection criteria of this section.

(C) The sample container was damaged in transit.

(D) There is substantial reason to believe that the sample was subject to tampering.

(ii) The system must report the results of all samples to the Director and all supporting documentation for samples the system believes should be invalidated.

(iii) To invalidate a sample under paragraph (f)(i) of this section, the decision and the rationale for the decision must be documented in writing. The Director may not invalidate a sample solely on the grounds that a follow-up sample result is higher or lower than that of the original sample.

(iv) The water system must collect replacement samples for any samples invalidated under this section if, after the invalidation of one or more samples, the system has too few samples to meet the minimum requirements of paragraph (c) of this section. Any such replacement samples must be taken as soon as possible, but no later than 20 days after the date the Director invalidates the sample or by the end of the applicable monitoring period, whichever occurs later. Replacement samples taken after the end of the applicable monitoring period shall not also be used to meet the monitoring requirements of a subsequent monitoring period. The replacement samples shall be taken at the same locations as the invalidated samples or, if that is not possible, at locations other than those already used for sampling during the monitoring period.

(g) Monitoring waivers for small systems. Any small system that meets the criteria of this paragraph may apply to the Director to reduce the frequency of monitoring for lead and copper under this section to once every nine years (i.e., a full waiver) if it meets all of the materials criteria specified in paragraph (g)(i) of this section and all of the monitoring criteria specified in paragraph (g) (ii) of this section. Any small system that meets the criteria in paragraphs (g) (i) and (ii) of this section only for lead, or only for copper, may apply to the Director for a waiver to reduce the frequency of tap water monitoring to once every nine years for that contaminant only (i.e., a partial waiver).

(i) Materials criteria. The system must demonstrate that its distribution system and service lines and all drinking water supply plumbing, including plumbing conveying drinking water within all residences and buildings connected to the system, are free of lead-containing materials and/or copper-containing materials, as those terms are defined in this paragraph, as follows:

(A) Lead. To qualify for a full waiver, or a waiver of the tap water monitoring requirements for lead (i.e., a lead waiver), the water system must provide certification and supporting documentation to the Director that the system is free of all lead-containing materials, as follows:

(I) It contains no plastic pipes which contain lead plasticizers, or plastic service lines which contain lead plasticizers; and

(II) It is free of lead service lines, lead pipes, lead soldered pipe joints, and leaded brass or bronze alloy fittings and fixtures, unless such fittings and fixtures meet the specifications of any standard established pursuant to 42 U.S.C. 300g-6(e) (SDWA section 1417 (e)).

(B) Copper. To qualify for a full waiver, or waiver of the tap water monitoring requirements for copper (i.e., a copper waiver), the water system must provide certification and supporting documentation to the Director that the system contains no copper pipes or copper service lines.

(ii) Monitoring criteria for waiver issuance. The system must have completed at least one 6-month round of standard tap water monitoring for lead and copper at sites approved by the Director and from the number of sites required by paragraph (c) of this section and demonstrate that the 90th percentile levels

for any and all rounds of monitoring conducted since the system became free of all lead-containing and/or copper-containing materials, as appropriate, meet the following criteria.

(A) Lead levels. To qualify for a full waiver, or a lead waiver, the system must demonstrate that the 90th percentile lead level does not exceed 0.005 mg/L.

(B) Copper levels. To qualify for a full waiver, or a copper waiver, the system must demonstrate that the 90th percentile lead level does not exceed 0.65 mg/L.

(iii) Director approval of waiver application. The Director shall notify the system of its waiver determination, in writing, setting forth the basis of its decision and any condition of the waiver. As a condition of the waiver, the Director may require the system to perform specific activities (e.g., limited monitoring, periodic outreach to customers to remind them to avoid installation of materials that might void the waiver) to avoid the risk of lead or copper concentration of concern in tap water. The small system must continue monitoring for lead and copper at the tap as required by paragraphs (d) (i) through (d) (iv) of this section, as appropriate, until it receives written notification from the Director the waiver has been approved.

(iv) Monitoring frequency for systems with waivers.

(A) A system with a full waiver must conduct tap water monitoring for lead and copper in accordance with paragraph (d)(iv)(D) of this section at the reduced number of sampling sites identified in paragraph (c) of this section at least once every nine years and provide the materials certification specified in paragraph (g)(i) of this section for both lead and copper to the Director along with the monitoring results. Samples collected every nine years shall be collected no later than every ninth calendar year.

(B) A system with a partial waiver must conduct tap water monitoring for the waived contaminant in accordance with paragraph (d)(iv)(D) of this section at the reduced number of sampling sites specified in paragraph (c) of this section at least once every nine years and provide the materials certification specified in paragraph (g)(i) of this section pertaining to the waived contaminant along with the monitoring results. Such a system also must continue to monitor for the non-waived contaminant in accordance with requirements of paragraph (d)(i) through (d)(iv) of this section, as appropriate.

(C) Any water system with a full or partial waiver shall notify the Director in writing in accordance with R309-210-6(8)(a)(iii) of any upcoming long-term change in treatment or addition of a new source, as described in that section. The Director must review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water system. The Director has the authority to require the system to add or modify waiver conditions (e.g., require recertification that the system is free of lead-containing and/or copper-containing materials, require additional round(s) of monitoring), if it deems such modifications are necessary to address treatment or source water changes at the system.

(D) If a system with a full or partial waiver because aware that it is no longer free of lead-containing or copper-containing materials, as appropriate, (e.g., as a result of new construction or repairs), the system shall notify the Director in writing no later than 60 days after becoming aware of such a change.

(v) Continued eligibility. If the system continues to satisfy the requirements of paragraph (g) (iv) of this section, the waiver will be renewed automatically, unless any of the conditions listed in paragraph (g)(v)(A) through (g)(v)(C) of this section occurs. A system whose waiver has been revoked may re-apply for a waiver at such time as it again meets the appropriate materials and monitoring criteria of paragraphs (g)(i) and (g)(ii) of this section.

(A) A system with a full waiver or lead waiver no longer satisfies the materials criteria of paragraph (g)(i)(A) of this section or has a 90th percentile lead level greater than 0.005

mg/L.

(B) A system with a full waiver or a copper waiver no longer satisfies the materials criteria of paragraph (g)(i)(B) of this section or has a 90th percentile copper level greater than 0.65 mg/L.

(C) The Director notifies the system, in writing, that the waiver has been revoked, setting forth the basis of its decision.

(vi) Requirements following waiver revocation. A system whose full or partial waiver has been revoked by the Director is subject to the corrosion control treatment and lead and copper tap water monitoring requirements, as follows:

(A) If the system exceeds the lead and/or copper action level, the system must implement corrosion control treatment in accordance with the deadlines specified in R309-210-6(2)(e), and any other applicable requirements of this subpart.

(B) If the system meets both the lead and the copper action level, the system must monitor for lead and copper at the tap no less frequently than once every three years using the reduced number of sample sites specified in paragraph (c) of this section.

(vii) Pre-existing waivers. Small system waivers approved by the Director in writing prior to April 11, 2000 shall remain in effect under the following conditions:

(A) If the system has demonstrated that it is both free of lead-containing and copper-containing materials, as required by paragraph (g)(i) of this section and that its 90th percentile lead levels and 90th percentile copper levels meet the criteria of paragraph (g)(ii) of this section, the waiver remains in effect so long as the system continues to meet the waiver eligibility criteria of paragraph (g)(v) of this section. The first round of tap water monitoring conducted pursuant to paragraph (g)(iv) of this section shall be completed no later than nine years after the last time the system has monitored for lead and copper at the tap.

(B) If the system has met the materials criteria of paragraph (g)(i) of this section but has not met the monitoring criteria of paragraph (g)(ii) of this section, the system shall conduct a round of monitoring for lead and copper at the tap demonstrating that it meets the criteria of paragraph (g)(ii) of this section no later than September 30, 2000. Thereafter, the waiver shall remain in effect as long as the system meets the continued eligibility criteria of paragraph (g)(v) of this section. The first round of tap water monitoring conducted pursuant to paragraph (g)(iv) of this section shall be completed no later than nine years after the round of monitoring conducted pursuant to paragraph (g)(ii) of this section.

(4) Corrosion Control for Control of Lead and Copper

(a) Description of corrosion control treatment requirements.

Each system shall complete the corrosion control treatment requirements described below which are applicable to such system under R309-210-6(2).

(i) System recommendation regarding corrosion control treatment

Based upon the results of lead and copper tap monitoring and water quality parameter monitoring, small and medium-size water systems exceeding the lead or copper action level shall recommend installation of one or more of the corrosion control treatments listed in R309-210-6(4)(a)(iii)(A) which the system believes constitutes optimal corrosion control for that system. The Director may require the system to conduct additional water quality parameter monitoring in accordance with R309-210-6(5)(b) to assist the Director in reviewing the system's recommendation.

(ii) Studies of corrosion control treatment required for small and medium-size systems.

The Director may require any small or medium-size system that exceeds the lead or copper action level to perform corrosion control studies under R309-210-6(4)(a)(iii) to identify optimal corrosion control treatment for the system.

(iii) Performance of corrosion control studies

(A) Any public water system performing corrosion control studies shall evaluate the effectiveness of each of the following treatments, and, if appropriate, combinations of the following treatments to identify the optimal corrosion control treatment for that system:

- (I) alkalinity and pH adjustment;
- (II) calcium hardness adjustment; and
- (III) the addition of a phosphate or silicate based corrosion inhibitor at a concentration sufficient to maintain an effective residual concentration in all test tap samples.

(B) The water system shall evaluate each of the corrosion control treatments using either pipe rig/loop tests, metal coupon tests, partial-system tests, or analyses based on documented analogous treatments with other systems of similar size, water chemistry and distribution system configuration.

(C) The water system shall measure the following water quality parameters in any tests conducted under this paragraph before and after evaluating the corrosion control treatments listed above:

- (I) lead;
- (II) copper;
- (III) pH;
- (IV) alkalinity;
- (V) calcium;
- (VI) conductivity;
- (VII) orthophosphate (when an inhibitor containing a phosphate compound is used);
- (VIII) silicate (when an inhibitor containing a silicate compound is used);
- (IX) water temperature.

(D) The water system shall identify all chemical or physical constraints that limit or prohibit the use of a particular corrosion control treatment and document such constraints with at least one of the following:

- (I) data and documentation showing that a particular corrosion control treatment has adversely affected other water treatment processes when used by another water system with comparable water quality characteristics; and/or
- (II) data and documentation demonstrating that the water system has previously attempted to evaluate a particular corrosion control treatment and has found that the treatment is ineffective or adversely affects other water quality treatment processes.

(E) The water system shall evaluate the effect of the chemicals used for corrosion control treatment on other water quality treatment processes.

(F) On the basis of an analysis of the data generated during each evaluation, the water system shall recommend to the Director in writing the treatment option that the corrosion control studies indicate constitutes optimal corrosion control treatment for that system. The water system shall provide a rationale for its recommendation along with all supporting documentation specified in R309-210-6(4)(a)(iii)(A) through R309-210-6(4)(a)(iii)(E).

(iv) Designation of optimal corrosion control treatment

(A) Based upon consideration of available information including, where applicable, studies performed under R309-210-6(4)(a)(iii) and a system's recommended treatment alternative, the Director shall either approve the corrosion control treatment option recommended by the system, or designate alternative corrosion control treatment(s) from among those listed in R309-210-6(4)(a)(iii)(A). When designating optimal treatment the Director shall consider the effects that additional corrosion control treatment will have on water quality parameters and on other water quality treatment processes.

(B) The Director shall notify the system of its decision on optimal corrosion control treatment in writing and explain the basis for this determination. If the Director requests additional

information to aid its review, the water system shall provide the information.

(v) Installation of optimal corrosion control

Each system shall properly install and operate throughout its distribution system the optimal corrosion control treatment designated by the Director under R309-210-6(4)(a)(iv).

(vi) Review of treatment and specification of optimal water quality control parameters

The Director shall evaluate the results of all lead and copper tap samples and water quality parameter samples submitted by the water system and determine whether the system has properly installed and operated the optimal corrosion control treatment designated by the Director in R309-210-6(4)(a)(iv). Upon reviewing the results of tap water and water quality parameter monitoring by the system, both before and after the system installs optimal corrosion control treatment, the Director shall designate:

(A) A minimum value or a range of values for pH measured at each entry point to the distribution system;

(B) A minimum pH value, measured in all tap samples. Such value shall be equal to or greater than 7.0, unless the Director determines that meeting a pH level of 7.0 is not technologically feasible or is not necessary for the system to optimize corrosion control;

(C) If a corrosion inhibitor is used, a minimum concentration or a range of concentrations for the inhibitor, measured at each entry point to the distribution system and in all tap samples, that the Director determines is necessary to form a passivating film on the interior walls of the pipes of the distribution system;

(D) If alkalinity is adjusted as part of optimal corrosion control treatment, a minimum concentration or a range of concentrations for alkalinity, measured at each entry point to the distribution system and in all tap samples;

(E) If calcium carbonate stabilization is used as part of corrosion control, a minimum concentration or a range of concentrations for calcium, measured in all tap samples.

The values for the applicable water quality control parameters listed above shall be those that the Director determines to reflect optimal corrosion control treatment for the system. The Director may designate values for additional water quality control parameters determined by the Director to reflect optimal corrosion control for the system. The Director shall notify the system in writing of these determinations and explain the basis for the decisions.

(vii) Continued operation and monitoring. All systems optimizing corrosion control shall continue to operate and maintain optimal corrosion control treatment, including maintaining water quality parameters at or above minimum values or within ranges designated by the Director under paragraph (vi) of this section, in accordance with this paragraph for all samples collected under R309-210-6(5)(d) through (f). Compliance with the requirements of this paragraph shall be determined every six months, as specified under R309-210-6(5)(d). A water system is out of compliance with the requirements of this paragraph for a six-month period if it has excursions for any Director specified parameter on more than nine days during the period. An excursion occurs whenever the daily value for one or more of the water quality parameters measured at a sampling location is below the minimum value or outside the range designated by the Director. Daily values are calculated as follows. The Director has discretion to delete results of obvious sampling errors from this calculation.

(A) On days when more than one measurement for the water quality parameter is collected at the sampling location, the daily value shall be the average of all results collected during the day regardless of whether they are collected through continuous monitoring, grab sampling, or combination of both.

(B) On days when only one measurement for the water

quality parameter is collected at the sampling location, the daily value shall be the result of that measurement.

(C) On days when no measurement is collected for the water quality parameter at the sampling location, the daily value shall be the daily value calculated on the most recent day on which the water quality parameter was measured at the sample site.

(viii) Modification of treatment decisions

Upon its own initiative or in response to a request by a water system or other interested party, the Director may modify its determination of the optimal corrosion control treatment under R309-210-6(4)(a)(iv) or optimal water quality control parameters under R309-210-6(4)(a)(vi). A request for modification by a system or other interested party shall: be in writing, explain why the modification is appropriate, and provide supporting documentation. The Director may modify its determination where it concludes that such change is necessary to ensure that the system continues to optimize corrosion control treatment. A revised determination shall: be made in writing, set forth the new treatment requirements, explain the basis for the Director's decision, and provide an implementation schedule for completing the treatment modifications.

(b) Source water treatment requirements.

Systems shall complete the applicable source water monitoring and treatment requirements (described in the referenced portions of R309-210-6(4)(b)(ii), and in R309-210-6(3), and R309-210-6(6)) by the following deadlines.

(i) Deadlines for Completing Source Water Treatment Steps

(A) Step 1: A system exceeding the lead or copper action level shall complete lead and copper source water monitoring (R309-210-6(6)(b)) and make a treatment recommendation to the Director (R309-210-6(4)(b)(i)) no later than 180 days after the end of the monitoring period during which the lead or copper action level was exceeded.

(B) Step 2: The Director shall make a determination regarding source water treatment (R309-210-6(4)(b)(ii)(B)) within 6 months after submission of monitoring results under step 1.

(C) Step 3: If the Director requires installation of source water treatment, the system shall install the treatment (R309-210-6(4)(b)(ii)(C)) within 24 months after completion of step 2.

(D) Step 4: The system shall complete follow-up tap water monitoring (R309-210-6(3)(d)(ii)) and source water monitoring (R309-210-6(6)(c)) within 36 months after completion of step 2.

(E) Step 5: The Director shall review the system's installation and operation of source water treatment and specify maximum permissible source water levels (R309-210-6(4)(b)(ii)(D)) within 6 months after completion of step 4.

(F) Step 6: The system shall operate in compliance with the Director specified maximum permissible lead and copper source water levels (R309-210-6(4)(b)(ii)(D)) and continue source water monitoring (R309-210-6(6)(d)).

(ii) Description of Source Water Treatment Requirements

(A) System treatment recommendation

Any system which exceeds the lead or copper action level shall recommend in writing to the Director the installation and operation of one of the source water treatments listed in R309-210-6(4)(b)(ii)(B). A system may recommend that no treatment be installed based upon a demonstration that source water treatment is not necessary to minimize lead and copper levels at users' taps.

(B) Determination regarding source water treatment

The Director shall complete an evaluation of the results of all source water samples submitted by the water system to determine whether source water treatment is necessary to minimize lead or copper levels in water delivered to users' taps. If the Director determines that treatment is needed, the Director

shall either require installation and operation of the source water treatment recommended by the system (if any) or require the installation and operation of another source water treatment from among the following: ion exchange, reverse osmosis, lime softening or coagulation/filtration. If the Director requests additional information to aid in its review, the water system shall provide the information by the date specified by the Director in its request. The Director shall notify the system in writing of the determination and set forth the basis for the decision.

(C) Installation of source water treatment

Each system shall properly install and operate the source water treatment designated by the Director under R309-210-6(4)(b)(ii)(B).

(D) Review of source water treatment and specification of maximum permissible source water levels

The Director shall review the source water samples taken by the water system both before and after the system installs source water treatment, and determine whether the system has properly installed and operated the source water treatment designated by the Director. Based upon its review, the Director shall designate the maximum permissible lead and copper concentrations for finished water entering the distribution system. Such levels shall reflect the contaminant removal capability of the treatment properly operated and maintained. The Director shall notify the system in writing and explain the basis for the decision.

(E) Continued operation and maintenance

Each water system shall maintain lead and copper levels below the maximum permissible concentrations designated by the Director at each sampling point monitored in accordance with R309-210-6(6). The system is out of compliance with this paragraph if the level of lead or copper at any sampling point is greater than the maximum permissible concentration designated by the Director.

(F) Modification of treatment decisions

Upon its own initiative or in response to a request by a water system or other interested party, the Director may modify its determination of the source water treatment under R309-210-6(4)(b)(ii)(B), or maximum permissible lead and copper concentrations for finished water entering the distribution system under R309-210-6(4)(b)(ii)(D). A request for modification by a system or other interested party shall: be in writing, explain why the modification is appropriate, and provide supporting documentation. The Director may modify the determination where it concludes that such change is necessary to ensure that the system continues to minimize lead and copper concentrations in source water. A revised determination shall: be made in writing, set forth the new treatment requirements, explain the basis for the decision, and provide an implementation schedule for completing the treatment modifications.

(c) Lead service line replacement requirements.

(i)(A) Systems that fail to meet the lead action level in tap samples taken pursuant to R309-210-6(3)(d)(ii), after installing corrosion control and/or source water treatment (whichever sampling occurs later), shall replace lead service lines in accordance with the requirements of this section. If a system is in violation of R309-210-6(2) or R309-210-6(4)(b) for failure to install source water or corrosion control treatment, the Director may require the system to commence lead service line replacement under this section after the date by which the system was required to conduct monitoring under R309-104-4.2.3.d.2. has passed. The first year of lead service line replacement shall begin on the first day following the end of the monitoring period in which the action level was exceeded under paragraph (a) of this section. If monitoring is required annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs. If the

Director has established an alternate monitoring period, then the end of the monitoring period will be the last day of that period.

(B) Any water system resuming a lead service line replacement program after the cessation of its lead service line replacement program as allowed by paragraph (f) of this section shall update its inventory of lead service lines to include those sites that were previously determined not to require replacement through the sampling provision under paragraph (c) of this section. The system will then divide the updated number of remaining lead service lines by the number of remaining years in the program to determine the number of lines that must be replaced per year (7 percent lead service line replacement is based on a 15-year replacement program, so, for example, systems resuming lead service line replacement after previously conducting two years of replacement would divide the updated inventory by 13). For those systems that have completed a 15-year lead service line replacement program, the Director will determine a schedule for replacing or retesting lines that were previously tested out under the replacement program when the system re-exceeds the action level.

(ii) A system shall replace annually at least 7 percent of the initial number of lead service lines in its distribution system. The initial number of lead service lines is the number of lead lines in place at the time the replacement program begins. The system shall identify the initial number of lead service lines in its distribution system, including an identification of the portion(s) owned by the system, based upon a materials evaluation, including the evaluation required under R309-210-6(3)(a) and relevant legal authorities (e.g., contracts, local ordinances) regarding the portion owned by the system. The first year of lead service line replacement shall begin on the date the action level was exceeded in tap sampling referenced in R309-210-6(4)(c)(i).

(iii) A system is not required to replace an individual lead service line if the lead concentration in all service line samples from that line, taken pursuant to R309-210-6(3)(b)(iii), is less than or equal to 0.015 mg/L.

(iv) A water system shall replace that portion of the lead service line that it owns. In cases where the system does not own the entire lead service line, the system shall notify the owner of the line, or the owner's authorized agent, that the system will replace the portion of the service line that it owns and shall offer to replace the owner's portion of the line. A system is not required to bear the cost of replacing the privately-owned portion of the line, nor is it required to replace the privately-owned portion where the owner chooses not to pay the cost of replacing the privately owned portion of the line, or where replacing the privately-owned portion would be precluded by State, local or common law. A water system that does not replace the entire length of the service line also shall complete the following tasks.

(A) At least 45 days prior to commencing with the partial replacement of a lead service line, the water system shall provide notice to the resident(s) of all buildings served by the line explaining that they may experience a temporary increase of lead levels in their drinking water, along with guidance on measures consumers can take to minimize their exposure to lead. The Director may allow the water system to provide notice under the previous sentence less than 45 days prior to commencing partial lead service line replacement where such replacement is in conjunction with emergency repairs. In addition, the water system shall inform the resident(s) served by the line that the system will, at the system's expense, collect a sample from each partially-replaced lead service line that is representative of the water in the service line for analysis of lead content, as prescribed under R309-210-6(3)(b)(iii), within 72 hours after the completion of the partial replacement of the service line. The system shall collect the sample and report the results of the analysis to the owner and the resident(s) served by

the line within three business days of receiving the results. Mailed notices post-marked within three business days of receiving the results shall be considered on time.

(B) The water system shall provide the information required by paragraph (c)(iv)(A) of this section to the residents of individual dwellings by mail or by other methods approved by the Director. In instances where multi-family dwellings are served by the line, the water system shall have the option to post the information at a conspicuous location.

(v) The Director shall require a system to replace lead service lines on a shorter schedule than that required by this section, taking into account the number of lead service lines in the system, where such a shorter replacement schedule is feasible. The Director shall make this determination in writing and notify the system of its finding within 6 months after the system is triggered into lead service line replacement based on monitoring referenced in R309-210-6(4)(c)(i).

(vi) Any system may cease replacing lead service lines whenever first draw samples collected pursuant to R309-210-6(3)(b)(ii) meet the lead action level during each of two consecutive monitoring periods and the system submits the results to the Director. If first draw tap samples collected in any such water system thereafter exceeds the lead action level, the system shall recommence replacing lead service lines, pursuant to R309-210-6(4)(c)(ii)(B).

(vii) To demonstrate compliance with R309-210-6(4)(c)(i) through R309-210-6(4)(c)(iv), a system shall report to the Director the information specified in R309-210-6(8)(e).

(5) Monitoring requirements for water quality parameters. All large water systems and all small and medium-size systems that exceed the lead or copper action level shall monitor water quality parameters in addition to lead and copper in accordance with this section.

(a) General Requirements

(i) Sample collection methods

(A) Tap samples shall be representative of water quality throughout the distribution system taking into account the number of persons served, the different sources of water, the different treatment methods employed by the system, and seasonal variability. Tap sampling under this section is not required to be conducted at taps targeted for lead and copper sampling under R309-210-6(3)(a).

(B) Samples collected at the entry point(s) to the distribution system shall be from locations representative of each source after treatment. If a system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating conditions (i.e., when water is representative of all sources being used).

(ii) Number of samples

(A) Systems shall collect two tap samples for applicable water quality parameters during each monitoring period specified under R309-210-6(5)(b) through R309-210-6(5)(e) from the following number of sites in Table 210-5.

TABLE 210-5
NUMBER OF WATER QUALITY PARAMETER SAMPLE SITES

System Size (# People Served)	# of Sites For Water Quality Parameters
Greater than 100,000	25
10,001 to 100,000	10
3,301 to 10,000	3
501 to 3,300	2
101 to 500	1
100 or less	1

(B) Except as provided in paragraph (c)(iii) of this section, Systems shall collect two samples for each applicable water quality parameter at each entry point to the distribution system during each monitoring period specified in R309-210-6(5)(b).

Systems shall collect one sample for each applicable water quality parameter at each entry point to the distribution system during each monitoring period specified in R309-210-6(5)(c) through R309-210-6(5)(e).

(b) Initial Sampling

All large water systems shall measure the applicable water quality parameters as specified below at taps and at each entry point to the distribution system during each six-month monitoring period specified in R309-210-6(3)(d)(i). All small and medium-size systems shall measure the applicable water quality parameters at the locations specified below during each six-month monitoring period specified in R309-210-6(3)(d)(i) during which the system exceeds the lead or copper action level.

(i) At taps:

- (A) pH;
- (B) alkalinity;
- (C) orthophosphate, when an inhibitor containing a phosphate compound is used;
- (D) silica, when an inhibitor containing a silicate compound is used;
- (E) calcium;
- (F) conductivity; and
- (G) water temperature.

(ii) At each entry point to the distribution system: all of the applicable parameters listed in R309-210-6(5)(b)(i).

(c) Monitoring after installation of corrosion control

Any large system which installs optimal corrosion control treatment pursuant to R309-210-6(2)(d)(iv) shall measure the water quality parameters at the locations and frequencies specified below during each six-month monitoring period specified in R309-210-6(3)(d)(ii)(A). Any small or medium-size system which installs optimal corrosion control treatment shall conduct such monitoring during each six-month monitoring period specified in R309-210-6(3)(d)(ii)(B) in which the system exceeds the lead or copper action level.

(i) At taps, two samples for:

- (A) pH;
- (B) alkalinity;
- (C) orthophosphate, when an inhibitor containing a phosphate compound is used;
- (D) silica, when an inhibitor containing a silicate compound is used;
- (E) calcium, when calcium carbonate stabilization is used as part of corrosion control.

(ii) Except as provided in Paragraph (c)(iii) of this section, at each entry point to the distribution system, at least on sample no less frequently than every two weeks (bi-weekly) for:

- (A) pH;
- (B) when alkalinity is adjusted as part of optimal corrosion control, a reading of the dosage rate of the chemical used to adjust alkalinity, and the alkalinity concentration; and

(C) when a corrosion inhibitor is used as part of optimal corrosion control, a reading of the dosage rate of the inhibitor used, and the concentration of orthophosphate or silica (whichever is applicable).

(iii) Any ground water system can limit entry point sampling described in paragraph (c)(ii) of this section to those entry points that are representative of water quality and treatment conditions throughout the system. If water from untreated ground water sources mixes with water from treated ground water sources, the system must monitor for water quality parameters both at representative entry points receiving treatment and representative entry points receiving no treatment. Prior to the start of any monitoring under this paragraph, the system shall provide to the Director written information identifying the selected entry points and documentation, including information on seasonal variability, sufficient to demonstrate that the sites are representative of water quality and treatment conditions throughout the system.

(d) Monitoring after Director specifies water quality parameter values for optimal corrosion control.

After the Director specifies the values for applicable water quality control parameters reflecting optimal corrosion control treatment under R309-210-6(4)(a)(vi), all large systems shall measure the applicable water quality parameters in accordance with paragraph (c) of this section and determine compliance with the requirements of R309-210-6(4)(a)(vii) every six months with the first six-month period to begin on either January 1 or July 1, whichever comes first, after the Director specifies the optimal values under R309-210-6(4)(a)(vi). Any small or medium-size system shall conduct such monitoring during each six-month period specified in this paragraph in which the system exceeds the lead or copper action level. For any such small and medium-size system that is subject to a reduced monitoring frequency pursuant to R309-210-6(3)(d)(iv) at the time of the action level exceedance, the start of the applicable six-month monitoring period under this paragraph shall coincide with the start of the applicable monitoring period under R309-210-6(3)(d)(iv). Compliance with Director-designated optimal water quality parameter values shall be determined as specified under R309-210-6(4)(a)(vii).

(e) Reduced monitoring

(i) Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the Director under R309-210-6(4)(a)(vi) during three consecutive years of monitoring may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in this paragraph (e)(i) of this section from every six months to annually. This sampling begins during the calendar year immediately following the end of the monitoring period in which the third consecutive year of six-month monitoring occurs. Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the Director under R309-210-6(4)(a)(vi), during three consecutive years of annual monitoring under this paragraph may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in paragraph (e)(i) of this section from annually to every three years. This sampling begins no later than the third calendar year following the end of the monitoring period in which the third consecutive year of monitoring occurs.

TABLE 210-6
REDUCED NUMBER OF WATER QUALITY PARAMETER SAMPLE SITES

System Size (# People Served)	Reduced # of Sites for Water Quality Parameters
Greater than 100,000	10
10,001 to 100,000	7
3,301 to 10,000	3
501 to 3,300	2
101 to 500	1
100 or less	1

(ii)(A) Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the State under R309-210-6(4)(a)(vi) during three consecutive years of monitoring may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in this paragraph (e)(i) of this section from every six months to annually. This sampling begins during the calendar year immediately following the end of the monitoring period in which the third consecutive year of six-month monitoring occurs. Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the State under R309-210-6(4)(a)(vi), during three consecutive years of annual monitoring under this paragraph may reduce the frequency with which it collects the

number of tap samples for applicable water quality parameters specified in paragraph (e)(i) of this section from annually to every three years. This sampling begins no later than the third calendar year following the end of the monitoring period in which the third consecutive year of monitoring occurs.

(B) A water system may reduce the frequency with which it collects tap samples for applicable water quality parameters specified in paragraph (e)(i) of this section to every three years if it demonstrates during two consecutive monitoring periods that its tap water lead level at the 90th percentile is less than or equal to the PQL for lead specified in R309-200-4(3), that its tap water copper level at the 90th percentile is less than or equal to 0.65 mg/L for copper in R309-200-5(2)(c), and that it also has maintained the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the Director under R309-210-6(4)(a)(vi). Monitoring conducted every three years shall be done no later than every third calendar year.

(iii) A water system that conducts sampling annually shall collect these samples evenly throughout the year so as to reflect seasonal variability.

(iv) Any water system subject to the reduced monitoring frequency that fails to operate at or above the minimum value or within the range of values for the water quality parameters specified by the Director in R309-210-6(4)(a)(vi) for more than 9 days in any six month period specified in R309-210-6(4)(a)(vii) shall resume distribution system tap water sampling in accordance with the number and frequency requirements in paragraph (d) of this section. Such a system may resume annual monitoring for water quality parameters at the tap at the reduced number of sites specified in paragraph (e)(i) of this section after it has completed two subsequent consecutive six month rounds of monitoring that meet the criteria of that paragraph or may resume triennial monitoring for water quality parameters at the tap at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either paragraph (e)(ii)(A) or (e)(ii)(B) of this section.

(f) Additional monitoring by systems

The results of any monitoring conducted in addition to the minimum requirements of this section shall be considered by the system and the Director in making any determinations (i.e., determining concentrations of water quality parameters) under this section or R309-210-6(4)(a).

(g) The Director has the authority to allow the use of previously collected monitoring data for purposes of monitoring, if the data were collected in accordance with this section and analyzed in accordance with R309-104-8.

(6) Monitoring requirements for lead and copper in source water.

(a) Sample location, collection methods, and number of samples

(i) A water system that fails to meet the lead or copper action level on the basis of tap samples collected in accordance with R309-210-6(3) shall collect lead and copper source water samples in accordance with the following requirements regarding sample location, number of samples, and collection methods:

(A) Groundwater systems shall take a minimum of one sample at every entry point to the distribution system which is representative of each well after treatment (hereafter called a sampling point). The system shall take one sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

(B) Surface water systems shall take a minimum of one sample at every entry point to the distribution system after any application of treatment or in the distribution system at a point which is representative of each source after treatment (hereafter called a sampling point). The system shall take each sample at the same sampling point unless conditions make another

sampling point more representative of each source or treatment plant. For purposes of this paragraph, surface water systems include systems with a combination of surface and ground sources.

(C) If a system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating conditions (i.e., when water is representative of all sources being used).

(D) The Director may reduce the total number of samples which must be analyzed by allowing the use of compositing. Compositing of samples must be done by certified laboratory personnel. Composite samples from a maximum of five samples are allowed, provided that if the lead concentration in the composite sample is greater than or equal to 0.001 mg/L or the copper concentration is greater than or equal to 0.160 mg/L, then either:

(I) A follow up sample shall be taken and analyzed within 14 days at each sampling point included in the composite; or

(II) If duplicates of or sufficient quantities from the original samples from each sampling point used in the composite are available, the system may use these instead of resampling.

(ii) Where the results of sampling indicate an exceedance of maximum permissible source water levels established under R309-210-6(4)(b)(ii)(D), the Director may require that one additional sample be collected as soon as possible after the initial sample was taken (but not to exceed two weeks) at the same sampling point. If a confirmation sample is taken for lead or copper, then the results of the initial and confirmation sample shall be averaged in determining compliance with the specified maximum permissible levels. Any sample value below the detection limit shall be considered to be zero. Any value above the detection limit but below the PQL shall either be considered as the measured value or be considered one-half the PQL.

(b) Monitoring frequency after system exceeds tap water action level.

Any system which exceeds the lead or copper action level at the tap shall collect one source water sample from each entry point to the distribution system no later than six months after the end of the monitoring period during which the lead or copper action level was exceeded. For monitoring periods that are annual or less frequent, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs, or if the Director has established an alternate monitoring period, the last day of that period.

(c) Monitoring frequency after installation of source water treatment.

Any system which installs source water treatment pursuant to R309-210-6(4)(b)(i)(C) shall collect an additional source water sample from each entry point to the distribution system during two consecutive six-month monitoring periods by the deadline specified in R309-210-6(4)(b)(i)(D).

(d) Monitoring frequency after Director specifies maximum permissible source water levels or determines that source water treatment is not needed

(i) A system shall monitor at the frequency specified below in cases where the Director specifies maximum permissible source water levels under R309-210-6(4)(b)(ii)(D) or determines that the system is not required to install source water treatment under R309-210-6(4)(b)(ii)(B).

(A) A water system using only groundwater shall collect samples once during the three-year compliance period in effect when the applicable determination under R309-210-6(6)(d)(i) is made. Such systems shall collect samples once during each subsequent compliance period. Triennial samples shall be collected every third calendar year.

(B) A water system using surface water (or a combination of surface and ground water) shall collect samples once during

each calendar year, the first annual monitoring period to begin during the year in which the applicable Director determination is made under paragraph (d)(i) of this section.

(ii) A system is not required to conduct source water sampling for lead and/or copper if the system meets the action level for the specific contaminant in tap water samples during the entire source water sampling period applicable to the system under R309-210-6(6)(d)(i)(A) or (B).

(e) Reduced monitoring frequency

(i) A water system using only ground water may reduce the monitoring frequency for lead and copper in source water to once during each nine-year compliance cycle (as that term is defined in R309-110-4) provided that the samples are collected no later than every ninth calendar year and if the system meets one of the following criteria:

(A) The system demonstrates that finished drinking water entering the distribution system has been maintained below the maximum permissible lead and copper concentrations specified by the Director in R309-210-6(4)(b)(ii)(D) during at least three consecutive compliance periods under paragraph (d)(i) of this section; or

(B) The Director has determined that source water treatment is not needed and the system demonstrates that, during at least three consecutive compliance periods in which sampling was conducted under paragraph (d)(i) of this section, the concentration of lead in source water was less than or equal to 0.005 mg/L and the concentration of copper in source water was less than or equal to 0.65 mg/L.

(ii) A water system using surface water (or a combination of surface water and ground water) may reduce the monitoring frequency in paragraph (d)(i) of this section to once during each nine-year compliance cycle (as that term is defined in R309-110-4) provided that the samples are collected no later than every ninth calendar year and if the system meets one of the following criteria:

(A) The system demonstrates that finished drinking water entering the distribution system has been maintained below the maximum permissible lead and copper concentrations specified by the Director in R309-210-6(4)(b)(ii)(D) for at least three consecutive years; or

(B) The Director has determined that source water treatment is not needed and the system demonstrates that, during at least three consecutive years, the concentration of lead in source water was less than or equal to 0.005 mg/L and the concentration of copper in source water was less than or equal to 0.65 mg/L.

(iii) A water system that uses a new source of water is not eligible for reduced monitoring for lead and/or copper until concentrations in samples collected from the new source during three consecutive monitoring periods are below the maximum permissible lead and copper concentrations specified by the Director in R309-210-6(4)(b)(i)(E).

(iv) The Director has the authority to allow the use of previously collected monitoring data for purposes of monitoring, if the data were collected in accordance with this section and analyzed in accordance with R309-104-8.

(7) Public education and supplemental monitoring requirements.

All water systems must deliver a consumer notice of lead tap water monitoring results to persons served by the water system at sites that are tested, as specified in paragraph (d) of this section. A water system that exceeds the lead action level based on tap water samples collected in accordance with R309-210-6(3) shall deliver the public education materials contained in paragraph (a) of this section in accordance with the requirements in paragraph (b) of this section. Water systems that exceed the lead action level must sample the tap water of any customer who requests it in accordance with paragraph (c) of this section.

(a) Content of written public education materials.

(i) Community water systems and Non-transient non-community water systems. Water systems must include the following elements in printed materials (e.g., brochures and pamphlets) in the same order as listed below. In addition, paragraphs (a)(i)(A) through (B) and (a)(i)(F) must be included in the materials, exactly as written, except for the text in brackets in these paragraphs for which the water system must include system-specific information. Any additional information presented by a water system must be consistent with the information below and be in plain language that can be understood by the general public. Water systems must submit all written public education materials to the Director prior to delivery. The Director may require the system to obtain approval of the content of written public materials prior to delivery.

(A) IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER. (INSERT NAME OF WATER SYSTEM) found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water.

(B) Health effects of lead. Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.

(C) Sources of Lead.

(I) Explain what lead is.

(II) Explain possible sources of lead in drinking water and how lead enters drinking water. Include information on home/building plumbing materials and service lines that may contain lead.

(III) Discuss other important sources of lead exposure in addition to drinking water (e.g., paint).

(D) Discuss the steps the consumer can take to reduce their exposure to lead in drinking water.

(I) Encourage running the water to flush out the lead.

(II) Explain concerns with using hot water from the tap and specifically caution against the use of hot water for preparing baby formula.

(III) Explain that boiling water does not reduce lead levels.

(IV) Discuss other options consumers can take to reduce exposure to lead in drinking water, such as alternative sources or treatment of water.

(V) Suggest that parents have their child's blood tested for lead.

(E) Explain why there are elevated levels of lead in the system's drinking water (if known) and what the water system is doing to reduce the lead levels in homes/buildings in this area.

(F) For more information, call us at (INSERT YOUR NUMBER) ((IF APPLICABLE), or visit our Web site at (INSERT YOUR WEB SITE HERE)). For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's Web site at "<http://frwebgate.access.gpo.gov/cgi-bin/leaving.cgi?from=leavingFR.html&log=linklog&to=http://www.epa.gov/lead>" or contact your health care provider.

(i) Community water systems. In addition to including the elements specified in paragraph (a)(i) of this section, community water systems must:

(A) Tell consumers how to get their water tested.
 (B) Discuss lead in plumbing components and the difference between low lead and lead free.

(b) Delivery of public education materials.

(i) For public water systems serving a large proportion of non-English speaking consumers, as determined by the Director, the public education materials must contain information in the appropriate language(s) regarding the importance of the notice or contain a telephone number or address where persons served may contact the water system to obtain a translated copy of the public education materials or to request assistance in the appropriate language.

(ii) A community water system that exceeds the lead action level on the basis of tap water samples collected in accordance with R309-210-6(3), and that is not already conducting public education tasks under this section, must conduct the public education tasks under this section within 60 days after the end of the monitoring period in which the exceedance occurred:

(A) Deliver printed materials meeting the content requirements of paragraph (a) of this section to all bill paying customers.

(B)(I) Contact customers who are most at risk by delivering education materials that meet the content requirements of paragraph (a) of this section to local public health agencies even if they are not located within the water system's service area, along with an informational notice that encourages distribution to all the organization's potentially affected customers or community water system's users. The water system must contact the local public health agencies directly by phone or in person. The local public health agencies may provide a specific list of additional community based organizations serving target populations, which may include organizations outside the service area of the water system. If such lists are provided, systems must deliver education materials that meet the content requirements of paragraph (a) of this section to all organizations on the provided lists.

(II) Contact customers who are most at risk by delivering materials that meet the content requirements of paragraph (a) of this section to the following organizations listed in aa through ff that are located within the water system's service area, along with an informational notice that encourages distribution to all the organization's potentially affected customers or community water system's users:

(aa) Public and private schools or school boards.

(bb) Women Infants and Children (WIC) and Head Start programs.

(cc) Public and private hospitals and medical clinics.

(dd) Pediatricians.

(ee) Family planning clinics.

(ff) Local welfare agencies.

(III) Make a good faith effort to locate the following organizations within the service area and deliver materials that meet the content requirements of paragraph (a) of this section to them, along with an informational notice that encourages distribution to all potentially affected customers or users. The good faith effort to contact at-risk customers may include requesting a specific contact list of these organizations from the local public health agencies, even if the agencies are not located within the water system's service area:

(aa) Licensed childcare centers.

(bb) Public and private preschools.

(cc) Obstetricians-Gynecologists and Midwives.

(C) No less often than quarterly, provide information on or in each water bill as long as the system exceeds the action level for lead. The message on the water bill must include the following statement exactly as written except for the text in brackets for which the water system must include system-specific information: (INSERT NAME OF WATER SYSTEM) found high levels of lead in drinking water in some homes. Lead

can cause serious health problems. For more information please call (INSERT NAME OF WATER SYSTEM) (or visit (INSERT YOUR WEB SITE HERE)). The message or delivery mechanism can be modified in consultation with the Director; specifically, the Director may allow a separate mailing of public education materials to customers if the water system cannot place the information on water bills.

(D) Post material meeting the content requirements of paragraph (a) of this section on the water system's Web site if the system serves a population greater than 100,000.

(E) Submit a press release to newspaper, television and radio stations.

(F) In addition to paragraphs (b)(ii)(A) through (E) of this section, systems must implement at least three activities from one or more categories listed below. The educational content and selection of these activities must be determined in consultation with the Director.

(I) Public Service Announcements.

(II) Paid advertisements.

(III) Public Area Information Displays.

(IV) Emails to customers.

(V) Public Meetings.

(VI) Household Deliveries.

(VII) Targeted Individual Customer Contact.

(VIII) Direct material distribution to all multi-family homes and institutions.

(VIII) Other methods approved by the Director.

(G) For systems that are required to conduct monitoring annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs, or, if the Director has established an alternate monitoring period, the last day of that period.

(iii) As long as a community water system exceeds the action level, it must repeat the activities pursuant to paragraph (b)(ii) of this section as described in paragraphs (b)(iii)(A) through (D) of this section.

(A) A community water system shall repeat the tasks contained in paragraphs (b)(ii)(A), (B) and (F) of this section every 12 months.

(B) A community water system shall repeat tasks contained in paragraph (b)(ii)(C) of this section with each billing cycle.

(C) A community water system serving a population greater than 100,000 shall post and retain material on a publicly accessible Web site pursuant to paragraph (b)(ii)(D) of this section.

(D) The community water system shall repeat the task in paragraph (b)(ii)(E) of this section twice every 12 months on a schedule agreed upon with the Director. The Director can allow activities in paragraph (b)(ii) of this section to extend beyond the 60-day requirement if needed for implementation purposes on a case-by-case basis; however, this extension must be approved in writing by the Director in advance of the 60-day deadline.

(iv) Within 60 days after the end of the monitoring period in which the exceedance occurred (unless it already is repeating public education tasks pursuant to paragraph (b)(v) of this section), a non-transient non-community water system shall deliver the public education materials specified by paragraph (a) of this section as follows:

(A) Post informational posters on lead in drinking water in a public place or common area in each of the buildings served by the system; and

(B) Distribute informational pamphlets and/or brochures on lead in drinking water to each person served by the non-transient non-community water system. The Director may allow the system to utilize electronic transmission in lieu of or combined with printed materials as long as it achieves at least the same coverage.

(C) For systems that are required to conduct monitoring annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs, or, if the Director has established an alternate monitoring period, the last day of that period.

(v) A non-transient non-community water system shall repeat the tasks contained in paragraph (b)(iv) of this section at least once during each calendar year in which the system exceeds the lead action level. The Director can allow activities in (b)(iv) of this section to extend beyond the 60-day requirement if needed for implementation purposes on a case-by-case basis; however, this extension must be approved in writing by the Director in advance of the 60-day deadline.

(vi) A water system may discontinue delivery of public education materials if the system has met the lead action level during the most recent six-month monitoring period conducted pursuant to R309-210-6(3). Such a system shall recommence public education in accordance with this section if it subsequently exceeds the lead action level during any monitoring period.

(vii) A community water system may apply to the Director, in writing, (unless the Director has waived the requirement for prior Director approval) to use only the text specified in paragraph (a)(i) of this section in lieu of the text in paragraphs (a)(i) and (a)(ii) of this section and to perform the tasks listed in paragraphs (b)(iv) and (b)(v) of this section in lieu of the tasks in paragraphs (b)(ii) and (b)(iii) of this section if:

(A) The system is a facility, such as a prison or a hospital, where the population served is not capable of or is prevented from making improvements to plumbing or installing point of use treatment devices; and

(B) The system provides water as part of the cost of services provided and does not separately charge for water consumption.

(viii) A community water system serving 3,300 or fewer people may limit certain aspects of their public education programs as follows:

(A) With respect to the requirements of paragraph (b)(ii)(F) of this section, a system serving 3,300 or fewer must implement at least one of the activities listed in that paragraph.

(B) With respect to the requirements of paragraph (b)(ii)(B) of this section, a system serving 3,300 or fewer people may limit the distribution of the public education materials required under that paragraph to facilities and organizations served by the system that are most likely to be visited regularly by pregnant women and children.

(C) With respect to the requirements of paragraph (b)(ii)(E) of this section, the Director may waive this requirement for systems serving 3,300 or fewer persons as long as system distributes notices to every household served by the system.

(c) Supplemental monitoring and notification of results. A water system that fails to meet the lead action level on the basis of tap samples collected in accordance with R309-210-6(3) shall offer to sample the tap water of any customer who requests it. The system is not required to pay for collecting or analyzing the sample, nor is the system required to collect and analyze the sample itself.

(d) Notification of results.

(i) Reporting requirement. All water systems must provide a notice of the individual tap results from lead tap water monitoring carried out under the requirements of R309-210-6(3) to the persons served by the water system at the specific sampling site from which the sample was taken (e.g., the occupants of the residence where the tap was tested).

(ii) Timing of notification. A water system must provide the consumer notice as soon as practical, but no later than 30 days after the system learns of the tap monitoring results.

(iii) Content. The consumer notice must include the

results of lead tap water monitoring for the tap that was tested, an explanation of the health effects of lead, list steps consumers can take to reduce exposure to lead in drinking water and contact information for the water utility. The notice must also provide the maximum contaminant level goal and the action level for lead and the definitions for these two terms from R309-225-5(3).

(iv) Delivery. The consumer notice must be provided to persons served at the tap that was tested, either by mail or by another method approved by the Director. For example, upon approval by the Director, a non-transient non-community water system could post the results on a bulletin board in the facility to allow users to review the information. The system must provide the notice to customers at sample taps tested, including consumers who do not receive water bills.

(8) Reporting requirements.

All water systems shall report all of the following information to the Director in accordance with this section.

(a) Reporting requirements for tap water monitoring for lead and copper and for water quality parameter monitoring

(i) Except as provided in paragraph (a)(i)(H) of this section, a water system shall report the information specified below for all tap water samples specified in R309-210-6(3) and for all water quality parameter samples specified in R309-210-6(5) within the first 10 days following the end of each applicable monitoring period specified in R309-210-6(3) and (5) (i.e., every six months, annually, every 3 years, or every 9 years). For monitoring periods with a duration less than six months, the end of the monitoring period is the last date samples can be collected during that period as specified in R309-210-6(3) and R309-210-6(5).

(A) the results of all tap samples for lead and copper including the location of each site and the criteria under R309-210-6(3)(a)(iii), (iv), (v), (vi), and (vii) under which the site was selected for the system's sampling pool;

(B) Documentation for each tap water lead or copper sample for which the water system request invalidation pursuant to R309-210-6(3)(f)(ii);

(D) the 90th percentile lead and copper concentrations measured from among all lead and copper tap water samples collected during each monitoring period, (calculated in accordance with R309-200-5(2)(c)) unless the Director calculates the system's 90th percentile lead and copper levels under paragraph (h) of this section;

(E) with the exception of initial tap sampling conducted pursuant to R309-210-6(3)(d)(i), the system shall designate any site which was not sampled during previous monitoring periods, and include an explanation of why sampling sites have changed;

(F) the results of all tap samples for pH, and where applicable, alkalinity, calcium, conductivity, temperature, and orthophosphate or silica collected under R309-210-6(5)(b) through (e);

(G) the results of all samples collected at the entry point(s) to the distribution system for applicable water quality parameters under R309-210-6(5)(b) through (e).

(H) A water system shall report the results of all water quality parameter samples collected under R309-210-6(5)(c) through (f) during each six month monitoring period specified in R309-210-6(5)(d) within the first 10 days following the end of the monitoring period unless the Director has specified a more frequent reporting requirement.

(ii) For a non-transient non-community water system, or a community water system meeting the criteria of R309-210-6(7)(b)(vii), that does not have enough taps that can provide first draw samples, the system must identify, in writing, each site that did not meet the six hour minimum standing time and the length of standing time for that particular substitute sample collected pursuant to R309-210-6(3)(b)(v) and include this information with the lead and copper tap sample results required

to be submitted pursuant to paragraph (a)(i)(A) of this section. The Director has waived prior Director approval of non-first-draw samples sites selected by the system pursuant to R309-210-6(3)(b)(v).

(iii) At a time specified by the Director, or if no specific time is designated by the Director, then as early as possible prior to the addition of a new source or any long-term change in water treatment, a water system deemed to have optimized corrosion control under R309-210-6(2)(b)(iii), a water system subject to reduced monitoring pursuant to R309-210-6(3)(d)(iv), or a water system subject to a monitoring waiver pursuant to R309-210-6(3)(g), shall submit written documentation to the Director describing the change or addition. The Director must review and approve the addition of a new source or long-term change in treatment before it is implemented by the water system. Examples of long-term treatment changes include the addition of a new treatment process or modification of an existing treatment process. Examples of modifications include switching secondary disinfectants, switching coagulants (e.g., alum to ferric chloride), and switching corrosion inhibitor products (e.g., orthophosphate to blended phosphate). Long-term changes can include dose changes to existing chemicals if the system is planning long-term changes to its finished water pH or residual inhibitor concentration. Long-term treatment changes would not include chemical dose fluctuations associated with daily raw water quality changes.

(iv) Any small system applying for a monitoring waiver under R309-210-6(3)(g), or subject to a waiver granted pursuant to R309-210-6(3)(g)(iii), shall provide the following information to the Director in writing by the specified deadline:

(A) By the start of the first applicable monitoring period in R309-210-6(3), any small system applying for a monitoring waiver shall provide the documentation required to demonstrate that it meets the waiver criteria of R309-210-6(3)(g)(i) and (ii).

(B) No later than nine years after the monitoring previously conducted pursuant to R309-210-6(3)(g)(ii) or (g)(iv)(A), each small system desiring to maintain its monitoring waiver shall provide the information required by R309-210-6(3)(g)(iv)(A) and (B).

(C) No later than 60 days after it becomes aware that it is no longer free of lead-containing or copper containing material, as appropriate, each small system with a monitoring waiver shall provide written notification to the Director, setting forth the circumstances resulting in the lead containing or copper containing materials being introduced into the system and what corrective action, if any, the system plans to remove these materials

(D) By October 10, 2000, any small system with a waiver granted prior to April 11, 2000 and that has not previously met the requirements of R309-210-6(3)(g)(ii) shall provide the information required by that paragraph.

(v) Each ground water system that limits water quality parameter monitoring to a subset of entry points under R309-210-6(5)(c)(iii) shall provide, by the commencement of such monitoring, written correspondence to the Director that identifies the selected entry points and includes information sufficient to demonstrate that the sites are representative of water quality and treatment conditions throughout the system.

(b) Source water monitoring reporting requirements

(i) A water system shall report the sampling results for all source water samples collected in accordance with R309-210-6(6) within the first 10 days following the end of each source water monitoring period (i.e., annually, per compliance period, per compliance cycle) specified in R309-210-6(6).

(ii) With the exception of the first round of source water sampling conducted pursuant to R309-210-6(6)(b), the system shall specify any site which was not sampled during previous monitoring periods, and include an explanation of why the sampling point has changed.

(c) Corrosion control treatment reporting requirements

By the applicable dates under R309-210-6(2), systems shall report the following information:

(i) for systems demonstrating that they have already optimized corrosion control, information required in R309-210-6(2)(b)(ii) or R309-210-6(2)(b)(iii).

(ii) for systems required to optimize corrosion control, their recommendation regarding optimal corrosion control treatment under R309-210-6(4)(a)(i).

(iii) for systems required to evaluate the effectiveness of corrosion control treatments under R309-210-6(4)(a)(iii), the information required by that paragraph.

(iv) for systems required to install optimal corrosion control designated by the Director under R309-210-6(4)(a)(iv), a letter certifying that the system has completed installing that treatment.

(d) Source water treatment reporting requirements

By the applicable dates in R309-210-6(4)(b), systems shall provide the following information to the Director :

(i) if required under R309-210-6(4)(b)(ii)(A), their recommendation regarding source water treatment;

(ii) for systems required to install source water treatment under R309-210-6(4)(b)(ii)(B), a letter certifying that the system has completed installing the treatment designated by the Director within 24 months after the Director designated the treatment.

(e) Lead service line replacement reporting requirements

Systems shall report the following information to the Director to demonstrate compliance with the requirements of R309-210-6(4)(c):

(i) No later than 12 months after the end of a monitoring period in which a system exceeds the lead action level in sampling referred to in R309-210-6(4)(c)(i), the system must submit written documentation to the Director of the material evaluation conducted as required in R309-210-6(3)(a), identify the initial number of lead service lines in its distribution system at the time the system exceeds the lead action level, and provide the system's schedule for annually replacing at least 7 percent of the initial number of lead service lines in its distribution system.

(ii) No later than 12 months after the end of a monitoring period in which a system exceeds the lead action level in sampling referred to in R309-210-6(4)(c)(i), and every 12 months thereafter, the system shall demonstrate to the Director in writing that the system has either:

(A) replaced in the previous 12 months at least 7 percent of the initial lead service lines (or a greater number of lines specified by the Director under R309-210-6(4)(c)(v)) in its distribution system, or

(B) conducted sampling which demonstrates that the lead concentration in all service line samples from an individual line(s), taken pursuant to R309-210-6(3)(b)(iii), is less than or equal to 0.015 mg/L. In such cases, the total number of lines replaced and/or which meet the criteria in R309-210-6(4)(c)(iii) shall equal at least 7 percent of the initial number of lead lines identified under paragraph (e)(i) of this section (or the percentage specified by the Director under R309-210-6(4)(c)(v)).

(iii) The annual letter submitted to the Director under R309-210-6(8)(e)(ii) shall contain the following information:

(A) the number of lead service lines scheduled to be replaced during the previous year of the system's replacement schedule;

(B) the number and location of each lead service line replaced during the previous year of the system's replacement schedule;

(C) if measured, the water lead concentration and location of each lead service line sampled, the sampling method, and the date of sampling.

(iv) Systems shall also report any additional information

as specified by the Director, and in a time and manner prescribed by the Director, to verify that all partial lead service line replacement activities have taken place.

(f) Public education program reporting requirements

(i) Any water system that is subject to the public education requirements in R309-210-6(7) shall, within ten days after the end of each period in which the system is required to perform public education in accordance with R309-210-6(7)(b), send written documentation to the Director that contains:

(A) A demonstration that the system has delivered the public education materials that meet the content requirements in R309-210-6(7)(a) and the delivery requirements in R309-210-6(7)(b); and

(B) A list of all the newspapers, radio stations, television stations, and facilities and organizations to which the system delivered public education materials during the period in which the system was required to perform public education tasks.

(ii) Unless required by the Director, a system that previously has submitted the information required by paragraph (f)(i)(B) of this section, as long as there have been no changes in the distribution list and the system certifies that the public education materials were distributed to the same list submitted previously.

(iii) No later than 3 months following the end of the monitoring period, each system must mail a sample copy of the consumer notification of tap results to the Director along with a certification that the notification has been distributed in a manner consistent with the requirements of R309-210-6(7)(d).

(g) Reporting of additional monitoring data

Any system which collects sampling data in addition to that required by this subpart shall report the results to the Director within the first ten day following the end of the applicable monitoring period under R309-210-6(3), R309-210-6(5) and R309-210-6(6) during which the samples are collected.

(h) Reporting of 90th percentile lead and copper concentrations where the Director calculates a system's 90th percentile concentrations. A water system is not required to report the 90th percentile lead and copper concentrations measured from among all lead and copper tap water samples during each monitoring period, as required by paragraph (a)(i)(D) of this section if:

(i) The Director has previously notified the water system that it will calculate the water system's 90th percentile lead and copper concentrations, based on the lead and copper tap results submitted pursuant to paragraph (h)(ii)(A) of this section, and has specified a date before the end of the applicable monitoring period by which the system must provide the results of lead and copper tap water samples;

(ii) The system has provided the following information to the Director by the date specified in paragraph (h)(i) of this section:

(A) The results of all tap samples for lead and copper including the location of each site and the criteria under R309-210-6(3)(a)(iii), (iv), (v), (vi), and/or (vii) under which the site was selected for the system's sampling pool, pursuant to paragraph (a)(i)(A) of this section; and

(B) An identification of sampling sites utilized during the current monitoring period that were not sampled during previous monitoring periods, and an explanation why sampling sites have changed; and

(iii) The Director has provided the results of the 90th percentile lead and copper calculations, in writing, to the water system before the end of the monitoring period.

R309-210-7. Asbestos Distribution System Monitoring.

(1) The frequency of monitoring conducted to determine compliance with the maximum contaminant level for asbestos specified in R309-200-5(1) shall be conducted as follows:

(a) Each community and non-transient non-community

water system is required to monitor for asbestos during the first three-year compliance period of each nine-year compliance cycle beginning in the compliance period starting January 1, 1993.

(b) If the system believes it is not vulnerable due to corrosion of asbestos-cement pipe, it may apply to the Director for a waiver of the monitoring requirement in paragraph (a) of this section. If the Director grants the waiver, the system is not required to monitor for asbestos.

(c) The Director may grant a waiver based on a consideration of the use of asbestos-cement pipe for finished water distribution and the corrosive nature of the water.

(d) A waiver remains in effect until the completion of the three-year compliance period. Systems not receiving a waiver must monitor in accordance with the provisions of paragraph (a) of this section.

(2) A system vulnerable to asbestos contamination due solely to corrosion of asbestos-cement pipe shall take one sample at a tap served by asbestos-cement pipe and under conditions where asbestos contamination is most likely to occur.

(3) A system vulnerable to asbestos contamination due both to its source water supply (as specified in R309-205-5(2)) and corrosion of asbestos-cement pipe shall take one sample at a tap served by asbestos-cement pipe and under conditions where asbestos contamination is most likely to occur.

(4) A system which exceeds the maximum contaminant levels as determined in R309-205-5(1)(g) shall monitor quarterly beginning in the next quarter after the violation occurred.

(5) The Director may decrease the quarterly monitoring requirement to the frequency specified in paragraph (a) of this section provided the Director has determined that the system is reliably and consistently below the maximum contaminant level. In no case can the Director make this determination unless a groundwater system takes a minimum of two quarterly samples and a surface (or combined surface/ground) water system takes a minimum of four quarterly samples.

(6) If monitoring data collected after January 1, 1990 are generally consistent with the requirements of R309-210-7, then the Director may allow systems to use that data to satisfy the monitoring requirement for the initial compliance period beginning January 1, 1993.

R309-210-8. Disinfection Byproducts - Stage 1 Requirements.

(1) General requirements. The requirements in this sub-section establish criteria under which community and non-transient non-community water systems that add a chemical disinfectant to the water in any part of the drinking water treatment process, shall modify their practices to meet MCLs and MRDLs in R309-200-5(3)(c) and meet treatment technique requirements in R309-215-12 and 13. The requirements of this sub-section also establish criteria under which transient non-community water systems that use chlorine dioxide shall modify their practices to meet MRDLs for chlorine dioxide in R309-200-5(3)(c).

(a) Compliance dates.

(i) Community and Non-transient non-community water systems. Surface water systems serving 10,000 or more persons must comply with this section beginning January 1, 2002. Surface water systems serving fewer than 10,000 persons and systems using only ground water not under the direct influence of surface water must comply with this section beginning January 1, 2004.

(ii) Transient non-community water systems. Surface water systems serving 10,000 or more persons and using chlorine dioxide as a disinfectant or oxidant must comply with any requirements for chlorine dioxide in this section beginning January 1, 2002. Surface water systems serving fewer than

10,000 persons and using chlorine dioxide as a disinfectant or oxidant and systems using only ground water not under the direct influence of surface water and using chlorine dioxide as a disinfectant or oxidant must comply with any requirements for chlorine dioxide in this section beginning January 1, 2004.

(b) Systems must take all samples during normal operating conditions.

(c) Systems may consider multiple wells drawing water from a single aquifer as one treatment plant for determining the minimum number of TTHM and HAA5 samples required, with approval from the Director.

(d) Failure to monitor in accordance with the monitoring plan required under paragraph (5) of this section is a monitoring violation.

(e) Failure to monitor will be treated as a violation for the entire period covered by the annual average where compliance is based on a running annual average of monthly or quarterly samples or averages and the system's failure to monitor makes it impossible to determine compliance with MCLs or MRDLs.

(f) Systems may use only data collected under the provisions of this section or the federal Information Collection Rule, (40 CFR, Part 141, Subpart M) to qualify for reduced monitoring.

(2) Monitoring requirements for disinfection byproducts.

(a) TTHMs and HAA5s

(i) Routine monitoring. Systems must monitor at the frequency indicated in the following:

(A) If a system elects to sample more frequently than the minimum required, at least 25 percent of all samples collected each quarter (including those taken in excess of the required frequency) must be taken at locations that represent the maximum residence time of the water in the distribution system. The remaining samples must be taken at locations representative of at least average residence time in the distribution system.

(B) Surface water systems serving at least 10,000 persons shall take four water samples per quarter per treatment plant. At least 25 percent of all samples collected each quarter shall be at locations representing maximum residence time. The remaining samples taken at locations representative of at least average residence time in the distribution system and representing the entire distribution system, taking into account number of persons served, different sources of water, and different treatment methods.

(C) Surface water systems serving from 500 to 9,999 persons shall take one water sample per quarter per treatment plant at a locations representing maximum residence time.

(D) Surface water systems serving fewer than 500 persons shall take one sample per year per treatment plant during month of warmest water temperature at a location representing maximum residence time. If the sample (or average of annual samples, if more than one sample is taken) exceeds the MCL, the system must increase monitoring to one sample per treatment plant per quarter, taken at a point reflecting the maximum residence time in the distribution system, until the system meets reduced monitoring criteria in paragraph (2)(a)(v) of this section.

(E) Systems using only ground water not under direct influence of surface water using chemical disinfectant and serving at least 10,000 persons shall take one water sample per quarter per treatment plant at a locations representing maximum residence time.

(F) Systems using only ground water not under direct influence of surface water using chemical disinfectant and serving fewer than 10,000 persons shall take one sample per year per treatment plant during month of warmest water temperature at a location representing maximum residence time. If the sample (or average of annual samples, if more than one sample is taken) exceeds the MCL, the system must increase monitoring to one sample per treatment plant per quarter, taken

at a point reflecting the maximum residence time in the distribution system, until the system meets criteria in paragraph (2)(a)(v) of this section for reduced monitoring.

(ii) Systems may reduce monitoring, except as otherwise provided, if the system has monitored for at least one year and is in accordance with the following paragraphs. Any Surface water system serving fewer than 500 persons may not reduce its monitoring to less than one sample per treatment plant per year.

(A) A surface water system serving at least 10,000 persons which has a source water annual average TOC level, before any treatment, of less than or equal to 4.0 mg/L and has a TTHM annual average of less than or equal to 0.040 mg/L and has a HAA5 annual average of less than or equal to 0.030 mg/L may reduce monitoring to one sample per treatment plant per quarter at a distribution system location reflecting maximum residence time.

(B) A surface water system serving from 500 to 9,999 persons which has a source water annual average TOC level, before any treatment, of less than or equal to 4.0 mg/L and has a TTHM annual average of less than or equal to 0.040 mg/L and has a HAA5 annual average of less than or equal to 0.030 mg/L may reduce monitoring to one sample per treatment plant per year at a distribution system location reflecting maximum residence time during the month of warmest water temperature.

(C) A system using only ground water not under direct influence of surface water using chemical disinfectant and serving at least 10,000 persons that has a TTHM annual average of less than or equal to 0.040 mg/L and has a HAA5 annual average of less than or equal to 0.030 mg/L may reduce monitoring to one sample per treatment plant per year at a distribution system location reflecting maximum residence time during the month of warmest water temperature.

(D) A system using only ground water not under direct influence of surface water using chemical disinfectant and serving fewer than 10,000 persons that has a TTHM annual average of less than or equal to 0.040 mg/L and has a HAA5 annual average of less than or equal to 0.030 mg/L for two consecutive years or has a TTHM annual average of less than or equal to 0.020 mg/L and has a HAA5 annual average of less than or equal to 0.015 mg/L for one year may reduce monitoring to one sample per treatment plant per three year monitoring cycle at a distribution system location reflecting maximum residence time during the month of warmest water temperature, with the three-year cycle beginning on January 1 following the quarter in which the system qualifies for reduced monitoring.

(iii) Monitoring requirements for source water TOC in order to qualify for reduced monitoring for TTHM and HAA5 under paragraph (2)(a)(ii) of this section, surface water systems not monitoring under the provisions of paragraph (d) of this section must take monthly TOC samples every 30 days at a location prior to any treatment, beginning April 1, 2008 or earlier, if specified by the Director. In addition to meeting other criteria for reduced monitoring in paragraph (2)(a)(ii) of this section, the source water TOC running annual average must be equal to or less than 4.0 mg/L (based on the most recent four quarters of monitoring) on a continuing basis at each treatment plant to reduce or remain on reduced monitoring for TTHM and HAA5. Once qualified for reduced monitoring for TTHM and HAA5 under paragraph (2)(a)(ii) of this section, a system may reduce source water TOC monitoring to quarterly TOC samples taken every 90 days at a location prior to any treatment.

(iv) Systems on a reduced monitoring schedule may remain on that reduced schedule as long as the average of all samples taken in the year (for systems which must monitor quarterly) or the result of the sample (for systems which must monitor no more frequently than annually) is no more than 0.060 mg/L and 0.045 mg/L for TTHMs and HAA5, respectively. Systems that do not meet these levels must resume monitoring at the frequency identified in paragraph (2)(a)(i) of

this section in the quarter immediately following the monitoring period in which the system exceeds 0.060 mg/L or 0.045 mg/L for TTHM or HAA5, respectively. For systems using only ground water not under the direct influence of surface water and serving fewer than 10,000 persons, if either the TTHM annual average is greater than 0.080 mg/L or the HAA5 annual average is greater than 0.060 mg/L, the system must go to the increased monitoring identified in paragraph (2)(a)(i) of this section in the quarter immediately following the monitoring period in which the system exceeds 0.080 mg/L or 0.060 mg/L for TTHMs or HAA5 respectively.

(v) Systems on increased monitoring may return to routine monitoring if, after at least one year of monitoring their TTHM annual average is less than or equal to 0.060 mg/L and their HAA5 annual average is less than or equal to 0.045 mg/L.

(vi) The Director may return a system to routine monitoring when appropriate to protect public health.

(b) Chlorite. Community and non-transient non-community water systems using chlorine dioxide, for disinfection or oxidation, must conduct monitoring for chlorite.

(i) Routine monitoring.

(A) Daily monitoring. Systems must take daily samples at the entrance to the distribution system. For any daily sample that exceeds the chlorite MCL, the system must take additional samples in the distribution system the following day at the locations required by paragraph (2)(b)(ii) of this section, in addition to the sample required at the entrance to the distribution system.

(B) Monthly monitoring. Systems must take a three-sample set each month in the distribution system. The system must take one sample at each of the following locations: near the first customer, at a location representative of average residence time, and at a location reflecting maximum residence time in the distribution system. Any additional routine sampling must be conducted in the same manner (as three-sample sets, at the specified locations). The system may use the results of additional monitoring conducted under paragraph (2)(b)(ii) of this section to meet the requirement for monitoring in this paragraph.

(ii) Additional monitoring. On each day following a routine sample monitoring result that exceeds the chlorite MCL at the entrance to the distribution system, the system is required to take three chlorite distribution system samples at the following locations: as close to the first customer as possible, in a location representative of average residence time, and as close to the end of the distribution system as possible (reflecting maximum residence time in the distribution system).

(iii) Reduced monitoring.

(A) Chlorite monitoring at the entrance to the distribution system required by paragraph (2)(b)(i)(A) of this section may not be reduced.

(B) Chlorite monitoring in the distribution system required by paragraph (2)(b)(i)(B) of this section may be reduced to one three-sample set per quarter after one year of monitoring where no individual chlorite sample taken in the distribution system under paragraph (2)(b)(i)(B) of this section has exceeded the chlorite MCL and the system has not been required to conduct monitoring under paragraph (2)(b)(ii) of this section. The system may remain on the reduced monitoring schedule until either any of the three individual chlorite samples taken monthly in the distribution system under paragraph (2)(b)(i)(B) of this section exceeds the chlorite MCL or the system is required to conduct monitoring under paragraph (2)(b)(ii) of this section, at which time the system must revert to routine monitoring.

(c) Bromate.

(i) Routine monitoring. Community and nontransient noncommunity systems using ozone, for disinfection or oxidation, must take one sample per month for each treatment plant in the system using ozone. Systems must take samples

monthly at the entrance to the distribution system while the ozonation system is operating under normal conditions.

(ii) Reduced monitoring.

(A) Until March 31, 2009, systems required to analyze for bromate may reduce monitoring from monthly to once per quarter, if the system demonstrates that the average source water bromide concentration is less than 0.05 mg/L based upon representative monthly bromide measurements for one year. The system may remain on reduced bromate monitoring until the running annual average source water bromide concentration, computed quarterly, is equal to or greater than 0.05 mg/L based upon representative monthly measurements. If the running annual average source water bromide concentration is greater than or equal to 0.05 mg/L, the system must resume routine monitoring required by paragraph (2)(c)(i) of this section in the following month.

(B) Beginning April 1, 2009, systems may no longer use the provisions of paragraph (2)(c)(ii)(A) of this section to qualify for reduced monitoring. A system required to analyze for bromate may reduce monitoring from monthly to quarterly, if the system's running annual average bromate concentration is equal to or less than 0.0025 mg/L based on monthly bromate measurements under paragraph (2)(c)(i) of this section for the most recent four quarters, with samples analyzed using Method 317.0 Revision 2.0, 326.0 or 321.8. If a system has qualified for reduced bromate monitoring under paragraph (2)(c)(ii)(A) of this section, that system may remain on reduced monitoring as long as the running annual average of quarterly bromate samples is less than or equal to 0.0025 mg/L based on samples analyzed using Method 317.0 Revision 2.0, 326.0 or 321.8. If the running annual average bromate concentration is greater than 0.0025 mg/L, the system must resume routine monitoring required by (2)(c)(i) of this section.

(3) Monitoring requirements for disinfectant residuals.

(a) Chlorine and chloramines.

(i) Routine monitoring. Community and nontransient noncommunity water systems that use chlorine or chloramines must measure the residual disinfectant level in distribution system at the same point in the distribution system and at the same time as total coliforms are sampled, as specified in R309-211. The Director may allow a public water system which uses both a surface water source or a ground water source under direct influence of surface water, and a ground water source, to take disinfectant residual samples at points other than the total coliform sampling points if the State determines that such points are more representative of treated (disinfected) water quality within the distribution system. Heterotrophic bacteria, measured as heterotrophic plate count (HPC) as specified in paragraph (a)(1) of this section, may be measured in lieu of residual disinfectant concentration.

(ii) In addition, ground water systems shall take the following readings at each facility a minimum of three times a week: the total volume of water treated; the type and amount of disinfectant used in treating the water (clearly indicating the weight if gas feeders are used, or the percent solution and volume fed if liquid feeders are used); and the setting of the rotometer valve or injector pump. Surface water systems may use the results of residual disinfectant concentration sampling conducted under R309-215-10(3) for systems which filter, in lieu of taking separate samples.

(iii) Reduced monitoring. Monitoring may not be reduced.

(b) Chlorine Dioxide.

(i) Routine monitoring. Community, nontransient noncommunity, and transient noncommunity water systems that use chlorine dioxide for disinfection or oxidation must take daily samples at the entrance to the distribution system. For any daily sample that exceeds the MRDL, the system must take samples in the distribution system the following day at the locations required by paragraph (3)(b)(ii) of this section, in

addition to the sample required at the entrance to the distribution system.

(ii) Additional monitoring. On each day following a routine sample monitoring result that exceeds the MRDL, the system is required to take three chlorine dioxide distribution system samples. If chlorine dioxide or chloramines are used to maintain a disinfectant residual in the distribution system, or if chlorine is used to maintain a disinfectant residual in the distribution system and there are no disinfection addition points after the entrance to the distribution system (i.e., no booster chlorination), the system must take three samples as close to the first customer as possible, at intervals of at least six hours. If chlorine is used to maintain a disinfectant residual in the distribution system and there are one or more disinfection addition points after the entrance to the distribution system (i.e., booster chlorination), the system must take one sample at each of the following locations: as close to the first customer as possible, in a location representative of average residence time, and as close to the end of the distribution system as possible (reflecting maximum residence time in the distribution system).

(iii) Reduced monitoring. Chlorine dioxide monitoring may not be reduced.

(4) Bromide. Systems required to analyze for bromate may reduce bromate monitoring from monthly to once per quarter, if the system demonstrates that the average source water bromide concentration is less than 0.05 mg/L based upon representative monthly measurements for one year. The system must continue bromide monitoring to remain on reduced bromate monitoring.

(5) Monitoring plans. Each system required to monitor under this section must develop and implement a monitoring plan. The system must maintain the plan and make it available for inspection by the Director and the general public no later than 30 days following the applicable compliance dates in R309-210-8(1)(a). All Surface water systems serving more than 3300 people must submit a copy of the monitoring plan to the Director no later than the date of the first report required under R309-105-16(2). The Director may also require the plan to be submitted by any other system. After review, the Director may require changes in any plan elements. The plan must include at least the following elements.

(a) Specific locations and schedules for collecting samples for any parameters included in this subpart.

(b) How the system will calculate compliance with MCLs, MRDLs, and treatment techniques.

(c) If approved for monitoring as a consecutive system, or if providing water to a consecutive system, the Director may modify the monitoring requirements treating the systems as a single distribution system, however, the sampling plan shall reflect the entire distribution system of all interconnected systems.

(6) Compliance requirements.

(a) General requirements.

(i) Where compliance is based on a running annual average of monthly or quarterly samples or averages and the system fails to monitor for TTHM, HAA5, or bromate, this failure to monitor will be treated as a monitoring violation for the entire period covered by the annual average. Where compliance is based on a running annual average of monthly or quarterly samples or averages and the system's failure to monitor makes it impossible to determine compliance with MRDLs for chlorine and chloramines, this failure to monitor will be treated as a monitoring violation for the entire period covered by the annual average.

(ii) All samples taken and analyzed under the provisions of this section shall be included in determining compliance, even if that number is greater than the minimum required.

(iii) If, during the first year of monitoring under R309-210-8, any individual quarter's average will cause the running

annual average of that system to exceed the MCL, the system is out of compliance at the end of that quarter.

(b) Disinfection byproducts.

(i) TTHMs and HAA5.

(A) For systems monitoring quarterly, compliance with MCLs in R309-200-5(3)(c) shall be based on a running annual arithmetic average, computed quarterly, of quarterly arithmetic averages of all samples collected by the system as prescribed by R309-210-8(2)(a).

(B) For systems monitoring less frequently than quarterly, systems demonstrate MCL compliance if the average of samples taken that year under the provisions of R309-210-8(2)(a) does not exceed the MCLs in R309-200-5(3)(c). If the average of these samples exceeds the MCL, the system shall increase monitoring to once per quarter per treatment plant and such a system is not in violation of the MCL until it has completed one year of quarterly monitoring, unless the result of fewer than four quarters of monitoring will cause the running annual average to exceed the MCL, in which case the system is in violation at the end of that quarter. Systems required to increase monitoring frequency to quarterly monitoring shall calculate compliance by including the sample which triggered the increased monitoring plus the following three quarters of monitoring.

(C) If the running annual arithmetic average of quarterly averages covering any consecutive four-quarter period exceeds the MCL, the system is in violation of the MCL and shall notify the public pursuant to R309-220, in addition to reporting to the Director pursuant to R309-105-16.

(D) If a PWS fails to complete four consecutive quarters of monitoring, compliance with the MCL for the last four-quarter compliance period shall be based on an average of the available data.

(ii) Chlorite. Compliance shall be based on an arithmetic average of each three sample set taken in the distribution system as prescribed by R309-210-8(2)(b)(i)(B) and (2)(b)(ii). If the arithmetic average of any three sample sets exceeds the MCL, the system is in violation of the MCL and shall notify the public pursuant to R309-220, in addition to reporting to the Director pursuant to R309-105-16.

(iii) Bromate. Compliance shall be based on a running annual arithmetic average, computed quarterly, of monthly samples (or, for months in which the system takes more than one sample, the average of all samples taken during the month) collected by the system as prescribed by R309-210-8(2)(c). If the average of samples covering any consecutive four-quarter period exceeds the MCL, the system is in violation of the MCL and shall notify the public pursuant to R309-220, in addition to reporting to the Director pursuant to R309-105-16. If a PWS fails to complete 12 consecutive months' monitoring, compliance with the MCL for the last four-quarter compliance period shall be based on an average of the available data.

(c) Disinfectant residuals.

(i) Chlorine and chloramines.

(A) Compliance shall be based on a running annual arithmetic average, computed quarterly, of monthly averages of all samples collected by the system under R309-210-8(3)(a). If the average covering any consecutive four-quarter period exceeds the MRDL, the system is in violation of the MRDL and shall notify the public pursuant to R309-220, in addition to reporting to the Director pursuant to R309-105-16.

(B) In cases where systems switch between the use of chlorine and chloramines for residual disinfection during the year, compliance shall be determined by including together all monitoring results of both chlorine and chloramines in calculating compliance. Reports submitted pursuant to R309-105-16 shall clearly indicate which residual disinfectant was analyzed for each sample.

(ii) Chlorine dioxide.

(A) Acute violations. Compliance shall be based on

consecutive daily samples collected by the system under R309-210-8(3)(b). If any daily sample taken at the entrance to the distribution system exceeds the MRDL, and on the following day one (or more) of the three samples taken in the distribution system exceed the MRDL, the system is in violation of the MRDL and shall take immediate corrective action to lower the level of chlorine dioxide below the MRDL and shall notify the public pursuant to the procedures for acute health risks in R309-220-5. Failure to take samples in the distribution system the day following an exceedance of the chlorine dioxide MRDL at the entrance to the distribution system will also be considered an MRDL violation and the system shall notify the public of the violation in accordance with the provisions for acute violations under R309-220-5 in addition to reporting the Director pursuant to R309-105-16.

(B) Nonacute violations. Compliance shall be based on consecutive daily samples collected by the system under R309-210-8(3)(b). If any two consecutive daily samples taken at the entrance to the distribution system exceed the MRDL and all distribution system samples taken are below the MRDL, the system is in violation of the MRDL and shall take corrective action to lower the level of chlorine dioxide below the MRDL at the point of sampling and will notify the public pursuant to the procedures for nonacute health risks in R309-220-6 in addition to reporting to the Director pursuant to R309-105-16. Failure to monitor at the entrance to the distribution system the day following an exceedance of the chlorine dioxide MRDL at the entrance to the distribution system is also an MRDL violation and the system shall notify the public of the violation in accordance with the provisions for nonacute violations under R309-220-6 in addition to reporting to the Director pursuant to R309-105-16.

R309-210-9. Disinfection Byproducts - Initial Distribution System Evaluations.

(1) General requirements.

(a) The requirements of this sub-section establish monitoring and other requirements for identifying R309-210-10 compliance monitoring locations for determining compliance with maximum contaminant levels for total trihalomethanes (TTHM) and haloacetic acids (five)(HAA5). The water system must use an Initial Distribution System Evaluation (IDSE) to determine locations with representative high TTHM and HAA5 concentrations throughout the distribution system. IDSEs are used in conjunction with, but separate from, R309-210-8 compliance monitoring, to identify and select R309-210-10 compliance monitoring locations.

(b) Applicability. Community water systems that uses a primary or residual disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light; or if the system is a non-transient non-community water systems that serves at least 10,000 people and uses a primary or residual disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light are subject to these requirements.

(c) Schedule. The water system must comply with the requirements of this subpart on the schedule in paragraph (c)(i).

(i) For water systems that are not part of a combined distribution system and systems that serve the largest population in the combined distribution system.

(A) For water systems that serve a population greater than or equal to 100,000:

(I) The water system must submit a standard monitoring plan or system specific study plan or 40/30 certification to the Director by or receive very small system waiver from the Director by October 1, 2006.

(II) The water system must complete the standard monitoring or system specific study by September 30, 2008.

(III) The water system must submit the IDSE report to the Director by January 1, 2009.

(B) For water systems that serve a population from 50,000 to 99,999:

(I) The water system must submit a standard monitoring plan or system specific study plan or 40/30 certification to the Director by or receive very small system waiver from the Director by April 1, 2007.

(II) The water system must complete the standard monitoring or system specific study by March 31, 2009.

(III) The water system must submit the IDSE report to the Director by July 1, 2009.

(C) For water systems that serve a population from 10,000 to 49,999:

(I) The water system must submit a standard monitoring plan or system specific study plan or 40/30 certification to the Director by or receive very small system waiver from the Director by October 1, 2007.

(II) The water system must complete the standard monitoring or system specific study by September 30, 2009.

(III) The water system must submit the IDSE report to the Director by January 1, 2010.

(D) For community water systems that serve a population less than 10,000:

(I) The water system must submit a standard monitoring plan or system specific study plan or 40/30 certification to the Director by or receive very small system waiver from the Director by April 1, 2008.

(II) The water system must complete the standard monitoring or system specific study by March 31, 2010.

(III) The water system must submit the IDSE report to the Director by July 1, 2010.

(ii) For other water systems that are part of a combined distribution system:

(A) For wholesale systems or consecutive systems:

(I) The water system must submit a standard monitoring plan or system specific study plan or 40/30 certification to the Director by or receive very small system waiver from the Director at the same time as the system with the earliest compliance date in the combined distribution system.

(II) The water system must complete the standard monitoring or system specific study at the same time as the system with the earliest compliance date in the combined distribution system.

(III) The water system must submit the IDSE report to the Director by at the same time as the system with the earliest compliance date in the combined distribution system.

(iii) If, within 12 months after the date the water system is required to submit the information in (i)(A)(I), (B)(I), (C)(I), (D)(I) and (ii)(A)(I) above, the Director does not approve the water system plan or notify the water system that it has not yet completed its review, the water system may consider the plan that was submitted as approved. The water system must implement that plan and must complete standard monitoring or a system specific study no later than the date identified in (i)(A)(II), (B)(II), (C)(II), (D)(II) and (ii)(A)(II) above.

(iv) The water system must submit the 40/30 certification under R309-210-9(4) by the date identified in (i)(A)(II), (B)(II), (C)(II), (D)(II) and (ii)(A)(II) above.

(v) If, within three months after the date identified in (i)(A)(III), (B)(III), (C)(III), (D)(III) and (ii)(A)(III) above (nine months after the date identified in this column if the water system must comply on the schedule in paragraph (c)(i)(C) of this section), the Director does not approve the IDSE report or notify the water system that it has not yet completed its review, the water system may consider the report submitted as approved and must implement the recommended R309-210-10 monitoring as required.

(vi) For the purpose of the schedule in paragraph (c)(i)

through (c)(v) of this section, the Director may determine that the combined distribution system does not include certain consecutive systems based on factors such as receiving water from a wholesale system only on an emergency basis or receiving only a small percentage and small volume of water from a wholesale system. The Director may also determine that the combined distribution system does not include certain wholesale systems based on factors such as delivering water to a consecutive system only on an emergency basis or delivering only a small percentage and small volume of water to a consecutive system.

(d) The water system must conduct standard monitoring that meets the requirements in R309-210-9(2), or a system specific study that meets the requirements in R309-210-9(3), or certify to the Director that the water system meet 40/30 certification criteria under R309-210-9(4), or qualify for a very small system waiver under R309-210-9(5).

(i) The water system must have taken the full complement of routine TTHM and HAA5 compliance samples required of a system with the population and source water under R309-210-8 (or the water system must have taken the full complement of reduced TTHM and HAA5 compliance samples required of a system with the population and source water under R309-210-8 if the water system meets reduced monitoring criteria under R309-210-8) during the period specified in R309-210-9(4)(a) to meet the 40/30 certification criteria in R309-210-9(4) the water system must have taken TTHM and HAA5 samples under R309-200-4(3) and R309-210-8 to be eligible for the very small system waiver in R309-210-9(5).

(ii) If the water system has not taken the required samples, the water system must conduct standard monitoring that meets the requirements in R309-210-9(2), or a system specific study that meets the requirements in R309-210-9(3).

(e) The water system must use only the analytical methods specified in R309-200-4(3), or otherwise approved by EPA for monitoring under this subpart, to demonstrate compliance with the requirements of this subpart.

(f) IDSE results will not be used for the purpose of determining compliance with MCLs in R309-200-5(3)(c).

(2) Standard monitoring.

(a) Standard monitoring plan. The standard monitoring plan must comply with paragraphs (a)(i) through (a)(iv) of this section. The water system must prepare and submit the standard monitoring plan to the Director according to the schedule in R309-210-9(1)(c).

(i) The standard monitoring plan must include a schematic of the distribution system (including distribution system entry points and their sources, and storage facilities), with notes indicating locations and dates of all projected standard monitoring, and all projected R309-210-8 compliance monitoring.

(ii) The standard monitoring plan must include justification of standard monitoring location selection and a summary of data the water system relied on to justify standard monitoring location selection.

(iii) The standard monitoring plan must specify the population served and system type (surface water or ground water).

(iv) The water system must retain a complete copy of the standard monitoring plan submitted under this paragraph (a), including any Director modification of the standard monitoring plan, for as long as the water system is required to retain the IDSE report under R309-105-17(8).

(b) Standard monitoring.

(i) The water system must monitor as indicated in paragraph (b)(i). The water system must collect dual sample sets at each monitoring location. One sample in the dual sample set must be analyzed for TTHM. The other sample in the dual sample set must be analyzed for HAA5. The water system must

conduct one monitoring period during the peak historical month for TTHM levels or HAA5 levels or the month of warmest water temperature. The water system must review available compliance, study, or operational data to determine the peak historical month for TTHM or HAA5 levels or warmest water temperature.

(A) Surface water systems serving less than 500 population which are consecutive systems.

(I) One monitoring period per year, dual sample sets must be taken during the peak historical month. Two dual samples sets must be collected per monitoring period.

(II) One dual sample set must be taken at the high TTHM location in the distribution system.

(III) One dual sample set must be taken near the entry point of the disinfected water into the distribution system.

(B) Surface water systems serving less than 500 population which are non-consecutive systems.

(I) One monitoring period per year, dual sample sets must be taken during the peak historical month. Two dual samples sets must be collected per monitoring period.

(II) One dual sample set must be taken at the high TTHM location in the distribution system.

(III) One dual sample set must be taken at the high HAA5 location in the distribution system.

(C) Surface water systems serving between 500 to 3,300 population which are consecutive systems.

(I) Four monitoring periods per year, dual sample sets must be taken every 90 days. Two dual samples sets must be collected per monitoring period.

(II) One dual sample set must be taken at the high TTHM location in the distribution system.

(III) One dual sample set must be taken near the entry point of the disinfected water into the distribution system.

(D) Surface water systems serving between 500 to 3,300 population which are non-consecutive systems.

(I) Four monitoring periods per year, dual sample sets must be taken every 90 days. Two dual samples sets must be collected per monitoring period.

(II) One dual sample set must be taken at the high TTHM location in the distribution system.

(III) One dual sample set must be taken at the high HAA5 location in the distribution system.

(E) Surface water systems serving between 3,301 to 9,999 population.

(I) Four monitoring periods per year, dual sample sets must be taken every 90 days. Four dual samples sets must be collected per monitoring period.

(II) Two dual sample sets must be taken at the high TTHM locations in the distribution system.

(III) One dual sample set must be taken at the high HAA5 location in the distribution system.

(IV) One dual sample set must be taken at an average residence time of the disinfected water in the distribution system.

(F) Surface water systems serving between 10,000 to 49,999 population.

(I) Six monitoring periods per year, dual sample sets must be taken every 60 days. Eight dual samples sets must be collected per monitoring period.

(II) Three dual sample sets must be taken at the high TTHM locations in the distribution system.

(III) Two dual sample sets must be taken at the high HAA5 locations in the distribution system.

(IV) Two dual sample sets must be taken at an average residence time of the disinfected water in the distribution system.

(V) One dual sample set must be taken near the entry point of the disinfected water into the distribution system.

(G) Surface water systems serving between 50,000 to

249,999 population.

(I) Six monitoring periods per year, dual sample sets must be taken every 60 days. 16 dual samples sets must be collected per monitoring period.

(II) Five dual sample sets must be taken at the high TTHM locations in the distribution system.

(III) Four dual sample sets must be taken at the high HAA5 locations in the distribution system.

(IV) Four dual sample sets must be taken at an average residence time of the disinfected water in the distribution system.

(V) Three dual sample sets must be taken near the entry point of the disinfected water into the distribution system.

(H) Surface water systems serving between 250,000 to 999,999 population.

(I) Six monitoring periods per year, dual sample sets must be taken every 60 days. 24 dual samples sets must be collected per monitoring period.

(II) Eight dual sample sets must be taken at the high TTHM locations in the distribution system.

(III) Six dual sample sets must be taken at the high HAA5 locations in the distribution system.

(IV) Six dual sample sets must be taken at an average residence time of the disinfected water in the distribution system.

(V) Four dual sample sets must be taken near the entry point of the disinfected water into the distribution system.

(I) Surface water systems serving between 1,000,000 to 4,999,999 population.

(I) Six monitoring periods per year, dual sample sets must be taken every 60 days. 32 dual samples sets must be collected per monitoring period.

(II) Ten dual sample sets must be taken at the high TTHM locations in the distribution system.

(III) Eight dual sample sets must be taken at the high HAA5 locations in the distribution system.

(IV) Eight dual sample sets must be taken at an average residence time of the disinfected water in the distribution system.

(V) Six dual sample sets must be taken near the entry point of the disinfected water into the distribution system.

(J) Surface water systems serving 5,000,000 or more population.

(I) Six monitoring periods per year, dual sample sets must be taken every 60 days. 40 dual samples sets must be collected per monitoring period.

(II) Twelve dual sample sets must be taken at the high TTHM locations in the distribution system.

(III) Ten dual sample sets must be taken at the high HAA5 locations in the distribution system.

(IV) Ten dual sample sets must be taken at an average residence time of the disinfected water in the distribution system.

(V) Eight dual sample sets must be taken near the entry point of the disinfected water into the distribution system.

(K) Ground water systems serving less than 500 population which are consecutive systems.

(I) One monitoring period per year, dual sample sets must be taken during the peak historical month. Two dual samples sets must be collected per monitoring period.

(II) One dual sample set must be taken at the high TTHM location in the distribution system.

(III) One dual sample set must be taken near the entry point of the disinfected water into the distribution system.

(L) Ground water systems serving less than 500 population which are non-consecutive systems.

(I) One monitoring period per year, dual sample sets must be taken during the peak historical month. Two dual samples sets must be collected per monitoring period.

(II) One dual sample set must be taken at the high TTHM location in the distribution system.

(III) One dual sample set must be taken at the high HAA5 location in the distribution system.

(M) Ground water systems serving between 500 to 9,999 population.

(I) Four monitoring periods per year, dual sample sets must be taken every 90 days. Two dual samples sets must be collected per monitoring period.

(II) One dual sample set must be taken at the high TTHM location in the distribution system.

(III) One dual sample set must be taken at the high HAA5 location in the distribution system.

(N) Ground water systems serving between 10,000 to 99,999 population.

(I) Four monitoring periods per year, dual sample sets must be taken every 90 days. Six dual samples sets must be collected per monitoring period.

(II) Two dual sample sets must be taken at the high TTHM locations in the distribution system.

(III) Two dual sample sets must be taken at the high HAA5 locations in the distribution system.

(IV) One dual sample set must be taken at an average residence time of the disinfected water in the distribution system.

(V) One dual sample set must be taken near the entry point of the disinfected water into the distribution system.

(O) Ground water systems serving between 100,000 to 499,999 population.

(I) Four monitoring periods per year, dual sample sets must be taken every 90 days. Eight dual samples sets must be collected per monitoring period.

(II) Three dual sample sets must be taken at the high TTHM locations in the distribution system.

(III) Three dual sample sets must be taken at the high HAA5 locations in the distribution system.

(IV) One dual sample set must be taken at an average residence time of the disinfected water in the distribution system.

(V) One dual sample set must be taken near the entry point of the disinfected water into the distribution system.

(P) Ground water systems serving 500,000 or greater population.

(I) Four monitoring periods per year, dual sample sets must be taken every 90 days. Twelve dual samples sets must be collected per monitoring period.

(II) Four dual sample sets must be taken at the high TTHM locations in the distribution system.

(III) Four dual sample sets must be taken at the high HAA5 locations in the distribution system.

(IV) Two dual sample sets must be taken at an average residence time of the disinfected water in the distribution system.

(V) Two dual sample sets must be taken near the entry point of the disinfected water into the distribution system.

(Q) A dual sample set (i.e., a TTHM and an HAA5 sample) must be taken at each monitoring location during each monitoring period.

(R) The peak historical month is the month with the highest TTHM or HAA5 levels or the warmest water temperature.

(ii) The water system must take samples at locations other than the existing R309-210-8 monitoring locations. Monitoring locations must be distributed throughout the distribution system.

(iii) If the number of entry points to the distribution system is fewer than the specified number of entry point monitoring locations, excess entry point samples must be replaced equally at high TTHM and HAA5 locations. If there is an odd extra location number, the water system must take a

sample at a high TTHM location. If the number of entry points to the distribution system is more than the specified number of entry point monitoring locations, the water system must take samples at entry points to the distribution system having the highest annual water flows.

(iv) The system monitoring under this paragraph (b) may not be reduced under the provisions of R309-105-5(2).

(c) IDSE report. The IDSE report must include the elements required in paragraphs (c)(i) through (c)(iv) of this section. The water system must submit the IDSE report to the Director according to the schedule in R309-210-9(1)(c).

(i) The IDSE report must include all TTHM and HAA5 analytical results from R309-210-8 compliance monitoring and all standard monitoring conducted during the period of the IDSE as individual analytical results and LRAAs presented in a tabular or spreadsheet format acceptable to the Director. If changed from the standard monitoring plan submitted under paragraph (a) of this section, the report must also include a schematic of the distribution system, the population served, and system type (surface water or ground water).

(ii) The IDSE report must include an explanation of any deviations from the approved standard monitoring plan.

(iii) The water system must recommend and justify R309-210-10 compliance monitoring locations and timing based on the protocol in R309-210-9(6).

(iv) The water system must retain a complete copy of the IDSE report submitted under this section for 10 years after the date that the water system submitted the report. If the Director modifies the R309-210-10 monitoring requirements that the water system recommended in the IDSE report or if the Director approves alternative monitoring locations, the water system must keep a copy of the Director's notification on file for 10 years after the date of the Director's notification. The water system must make the IDSE report and any Director notification available for review by the Director or the public.

(3) System specific studies.

(a) System specific study plan. The water system specific study plan must be based on either existing monitoring results as required under paragraph (a)(i) of this section or modeling as required under paragraph (a)(ii) of this section. The water system must prepare and submit the system specific study plan to the Director according to the schedule in R309-210-9(1)(c).

(i) Existing monitoring results. The water system may comply by submitting monitoring results collected before the water system is required to begin monitoring under R309-210-9(1)(c). The monitoring results and analysis must meet the criteria in paragraphs (a)(i)(A) and (a)(i)(B) of this section.

(A) Minimum requirements.

(I) TTHM and HAA5 results must be based on samples collected and analyzed in accordance with R309-200-4(3). Samples must be collected no earlier than five years prior to the study plan submission date.

(II) The monitoring locations and frequency must meet the conditions identified in this paragraph (a)(i)(A)(II). Each location must be sampled once during the peak historical month for TTHM levels or HAA5 levels or the month of warmest water temperature for every 12 months of data submitted for that location. Monitoring results must include all R309-210-8 compliance monitoring results plus additional monitoring results as necessary to meet minimum sample requirements.

(III) Surface water systems serving a population less than 500 shall have data from:

- (aa) three monitoring locations; and
- (bb) three samples for each TTHM and HAA5.

(IV) Surface water systems serving a population between 500 to 3,300 shall have data from:

- (aa) three monitoring locations; and
- (bb) nine samples each for TTHM and HAA5.

(V) Surface water systems serving a population between

3,301 to 9,999 shall have data from:

- (aa) six monitoring locations; and
- (bb) 36 samples each for TTHM and HAA5.

(VI) Surface water systems serving a population between 10,000 to 49,999 shall have data from:

- (aa) 12 monitoring locations; and
- (bb) 72 samples each for TTHM and HAA5.

(VII) Surface water systems serving a population between 50,000 to 249,999 shall have data from:

- (aa) 24 monitoring locations; and
- (bb) 144 samples each for TTHM and HAA5.

(VIII) Surface water systems serving a population between 250,000 to 999,999 shall have data from:

- (aa) 36 monitoring locations; and
- (bb) 216 samples each for TTHM and HAA5.

(IX) Surface water systems serving a population between 1,000,000 to 4,999,999 shall have data from:

- (aa) 48 monitoring locations; and
- (bb) 288 samples each for TTHM and HAA5.

(X) Surface water systems serving a population 5,000,000 or greater shall have data from:

- (aa) 60 monitoring locations; and
- (bb) 360 samples each for TTHM and HAA5.

(XI) Ground water systems serving a population less than 500 shall have data from:

- (aa) three monitoring locations; and
- (bb) three samples for each TTHM and HAA5.

(XII) Ground water systems serving a population between 500 to 9,999 shall have data from:

- (aa) three monitoring locations; and
- (bb) nine samples each for TTHM and HAA5.

(XIII) Ground water systems serving a population between 10,000 to 99,999 shall have data from:

- (aa) 12 monitoring locations; and
- (bb) 48 samples each for TTHM and HAA5.

(XIV) Ground water systems serving a population between 100,000 to 499,999 shall have data from:

- (aa) 18 monitoring locations; and
- (bb) 72 samples each for TTHM and HAA5.

(XV) Ground water systems serving a population of 500,000 or greater shall have data from:

- (aa) 24 monitoring locations; and
- (bb) 96 samples each for TTHM and HAA5.

(B) Reporting monitoring results. The water system must report the information in this paragraph (a)(i)(B).

(I) The water system must report previously collected monitoring results and certify that the reported monitoring results include all compliance and non-compliance results generated during the time period beginning with the first reported result and ending with the most recent R309-210-8 results.

(II) The water system must certify that the samples were representative of the entire distribution system and that treatment, and distribution system have not changed significantly since the samples were collected.

(III) The study monitoring plan must include a schematic of the distribution system (including distribution system entry points and their sources, and storage facilities), with notes indicating the locations and dates of all completed or planned system specific study monitoring.

(IV) The water system specific study plan must specify the population served and system type (surface water or ground water).

(V) The water system must retain a complete copy of the system specific study plan submitted under this paragraph (a)(i), including any Director modification of the system specific study plan, for as long as the water system is required to retain the IDSE report under paragraph (b)(v) of this section.

(VI) If the water system submits previously collected data

that fully meet the number of samples required under paragraph (a)(i)(A)(II) of this section and the Director rejects some of the data, the water system must either conduct additional monitoring to replace rejected data on a schedule the Director approves or conduct standard monitoring under R309-210-9(2).

(ii) Modeling. The water system may comply through analysis of an extended period simulation hydraulic model. The extended period simulation hydraulic model and analysis must meet the criteria in this paragraph (a)(ii).

(A) Minimum requirements.

(I) The model must simulate 24 hour variation in demand and show a consistently repeating 24 hour pattern of residence time.

(II) The model must represent the criteria listed in paragraphs (a)(ii)(A)(II)(aa) through (ii) of this section.

(aa) 75% of pipe volume;

(bb) 50% of pipe length;

(cc) All pressure zones;

(dd) All 12-inch diameter and larger pipes;

(ee) All 8-inch and larger pipes that connect pressure zones, influence zones from different sources, storage facilities, major demand areas, pumps, and control valves, or are known or expected to be significant conveyors of water;

(ff) All 6-inch and larger pipes that connect remote areas of a distribution system to the main portion of the system;

(gg) All storage facilities with standard operations represented in the model; and

(hh) All active pump stations with controls represented in the model; and

(ii) All active control valves.

(III) The model must be calibrated, or have calibration plans, for the current configuration of the distribution system during the period of high TTHM formation potential. All storage facilities must be evaluated as part of the calibration process. All required calibration must be completed no later than 12 months after plan submission.

(B) Reporting modeling. The system specific study plan must include the information in this paragraph (a)(ii)(B).

(I) Tabular or spreadsheet data demonstrating that the model meets requirements in paragraph (a)(ii)(A)(II) of this section.

(II) A description of all calibration activities undertaken, and if calibration is complete, a graph of predicted tank levels versus measured tank levels for the storage facility with the highest residence time in each pressure zone, and a time series graph of the residence time at the longest residence time storage facility in the distribution system showing the predictions for the entire simulation period (i.e., from time zero until the time it takes for the model to reach a consistently repeating pattern of residence time).

(III) Model output showing preliminary 24 hour average residence time predictions throughout the distribution system.

(IV) Timing and number of samples representative of the distribution system planned for at least one monitoring period of TTHM and HAA5 dual sample monitoring at a number of locations no less than would be required for the system under standard monitoring in R309-210-9(2) during the historical month of high TTHM. These samples must be taken at locations other than existing R309-210-8 compliance monitoring locations.

(V) Description of how all requirements will be completed no later than 12 months after the water system submits the system specific study plan.

(VI) Schematic of the distribution system (including distribution system entry points and their sources, and storage facilities), with notes indicating the locations and dates of all completed system specific study monitoring (if calibration is complete) and all R309-210-8 compliance monitoring.

(VII) Population served and system type (surface water or

ground water).

(VIII) The water system must retain a complete copy of the system specific study plan submitted under this paragraph (a)(ii), including any Director modification of the system specific study plan, for as long as the water system is required to retain the IDSE report under paragraph (b)(vii) of this section.

(C) If the water system submits a model that does not fully meet the requirements under paragraph (a)(ii) of this section, the water system must correct the deficiencies and respond to Director inquiries concerning the model. If the water system fails to correct deficiencies or respond to inquiries to the Director's satisfaction, the water system must conduct standard monitoring under R309-210-9(2).

(b) IDSE report. The IDSE report must include the elements required in paragraphs (b)(i) through (b)(vi) of this section. The water system must submit the IDSE report according to the schedule in R309-210-9(1)(c).

(i) The IDSE report must include all TTHM and HAA5 analytical results from R309-210-8 compliance monitoring and all system specific study monitoring conducted during the period of the system specific study presented in a tabular or spreadsheet format acceptable to the Director. If changed from the system specific study plan submitted under paragraph (a) of this section, the IDSE report must also include a schematic of the distribution system, the population served, and system type (surface water or ground water).

(ii) If the water system used the modeling provision under paragraph (a)(ii) of this section, the water system must include final information for the elements described in paragraph (a)(ii)(B) of this section, and a 24-hour time series graph of residence time for each R309-210-10 compliance monitoring location selected.

(iii) The water system must recommend and justify R309-210-10 compliance monitoring locations and timing based on the protocol in R309-210-9(6).

(iv) The IDSE report must include an explanation of any deviations from the approved system specific study plan.

(v) The IDSE report must include the basis (analytical and modeling results) and justification the water system used to select the recommended R309-210-10 monitoring locations.

(vi) The water system may submit the IDSE report in lieu of the system specific study plan on the schedule identified in R309-210-9(1)(c) for submission of the system specific study plan if the water system believes that it has the necessary information by the time that the system specific study plan is due. If the water system elects this approach, the IDSE report must also include all information required under paragraph (a) of this section.

(vii) The water system must retain a complete copy of the IDSE report submitted under this section for 10 years after the date the water system submitted the IDSE report. If the Director modifies the R309-210-10 monitoring requirements the water system recommended in the IDSE report or if the Director approves alternative monitoring locations, the water system must keep a copy of the Director's notification on file for 10 years after the date of the Director's notification. The water system must make the IDSE report and any Director notification available for review by the Director or the public.

(4) 40/30 certification.

(a) Eligibility. The water system is eligible for 40/30 certification if it had no TTHM or HAA5 monitoring violations under R309-210-8 of this part and no individual sample exceeded 0.040 mg/L for TTHM or 0.030 mg/L for HAA5 during an eight consecutive calendar quarter period beginning no earlier than the date specified in this paragraph (a).

(i) If the 40/30 certification is due October 1, 2006 then the eligibility for 40/30 certification is based on eight consecutive calendar quarters of R309-210-8 compliance

monitoring results beginning no earlier than January 2004.

(ii) If the 40/30 certification is due April 1, 2007 then the eligibility for 40/30 certification is based on eight consecutive calendar quarters of R309-210-8 compliance monitoring results beginning no earlier than January 2004.

(iii) If the 40/30 certification is due October 1, 2007 then the eligibility for 40/30 certification is based on eight consecutive calendar quarters of R309-210-8 compliance monitoring results beginning no earlier than January 2005.

(iv) If the 40/30 certification is due April 1, 2008 then the eligibility for 40/30 certification is based on eight consecutive calendar quarters of R309-210-8 compliance monitoring results beginning no earlier than January 2005.

(v) Unless the water system is on reduced monitoring under R309-210-8 of this part and were not required to monitor during the specified period. If the water system did not monitor during the specified period, the water system must base its eligibility on compliance samples taken during the 12 months preceding the specified period.

(b) 40/30 certification.

(i) The water system must certify to the Director that every individual compliance sample taken under R309-210-8 of this part during the periods specified in paragraph (a) of this section were less than or equal to 0.040 mg/L for TTHM and less than or equal to 0.030 mg/L for HAA5, and that the water system did not have any TTHM or HAA5 monitoring violations during the period specified in paragraph (a) of this section.

(ii) The Director may require the water system to submit compliance monitoring results, distribution system schematics, and/or recommended R309-210-10 compliance monitoring locations in addition to the certification. If the water system fails to submit the requested information, the Director may require standard monitoring under R309-210-9(2) or a system specific study under R309-210-9(3).

(iii) The Director may still require standard monitoring under R309-210-9(2) or a system specific study under R309-210-9(3) even if the water system meets the criteria in paragraph (a) of this section.

(iv) A water system must retain a complete copy of its certification submitted under this section for 10 years after the date that the water system submitted the certification. The water system must make the certification, all data upon which the certification is based, and any Director notification available for review by the Director or the public.

(5) Very small system waivers.

(a) If the water system serves fewer than 500 people and it has taken TTHM and HAA5 samples under R309-210-8, the water system is not required to comply with this subpart unless the Director notifies the water system that it must conduct standard monitoring under R309-210-9(2) or a system specific study under R309-210-9(3).

(b) If the water system has not taken TTHM and HAA5 samples under R309-210-8 or if the Director notifies the water system that the water system must comply with this subpart, the water system must conduct standard monitoring under R309-210-9(2) or a system specific study under R309-210-9(3).

(6) Stage 2 (R309-210-10) compliance monitoring location recommendations.

(a) The IDSE report must include the recommendations and justification for where and during what month(s) TTHM and HAA5 monitoring for R309-210-10 of this part should be conducted. The water system must base the recommendations on the criteria in paragraphs (b) through (e) of this section.

(b) The water system must select the number of monitoring locations specified in this paragraph (b). The water system will use these recommended locations as R309-210-10 routine compliance monitoring locations, unless Director requires different or additional locations. The water system should distribute locations throughout the distribution system to the

extent possible.

(i) Surface water systems serving less than 500.

(A) One monitoring period per year. Two dual samples sets must be collected per monitoring period.

(B) One dual sample set must be taken at the high TTHM location in the distribution system.

(C) One dual sample set must be taken at the high HAA5 location in the distribution system.

(ii) Surface water systems serving between 500 to 3,300.

(A) Four monitoring periods per year, dual sample sets must be taken every 90 days. Two dual samples sets must be collected per monitoring period.

(B) One dual sample set must be taken at the high TTHM location in the distribution system.

(C) One dual sample set must be taken at the high HAA5 location in the distribution system.

(iii) Surface water systems serving between 3,301 to 9,999 population.

(A) Four monitoring periods per year, dual sample sets must be taken every 90 days. Two dual samples sets must be collected per monitoring period.

(B) One dual sample set must be taken at the high TTHM locations in the distribution system.

(C) One dual sample set must be taken at the high HAA5 location in the distribution system.

(iv) Surface water systems serving between 10,000 to 49,999 population.

(A) Four monitoring periods per year, dual sample sets must be taken every 90 days. Four dual samples sets must be collected per monitoring period.

(B) Two dual sample sets must be taken at the high TTHM locations in the distribution system.

(C) One dual sample set must be taken at the high HAA5 locations in the distribution system.

(D) One dual sample set must be taken at an existing R309-210-8 compliance location.

(v) Surface water systems serving between 50,000 to 249,999 population.

(A) Four monitoring periods per year, dual sample sets must be taken every 90 days. Eight dual samples sets must be collected per monitoring period.

(B) Three dual sample sets must be taken at the high TTHM locations in the distribution system.

(C) Three dual sample sets must be taken at the high HAA5 locations in the distribution system.

(D) Two dual samples sets must be taken at an existing R309-210-8 compliance location.

(vi) Surface water systems serving between 250,000 to 999,999 population.

(A) Four monitoring periods per year, dual sample sets must be taken every 90 days. 12 dual samples sets must be collected per monitoring period.

(B) Five dual sample sets must be taken at the high TTHM locations in the distribution system.

(C) Four dual sample sets must be taken at the high HAA5 locations in the distribution system.

(D) Three dual sample sets must be taken at an existing R309-210-8 compliance location.

(vii) Surface water systems serving between 1,000,000 to 4,999,999 population.

(A) Four monitoring periods per year, dual sample sets must be taken every 90 days. 16 dual samples sets must be collected per monitoring period.

(B) Six dual sample sets must be taken at the high TTHM locations in the distribution system.

(C) Six dual sample sets must be taken at the high HAA5 locations in the distribution system.

(D) Four dual sample sets must be taken at an existing R309-210-8 compliance location.

(viii) Surface water systems serving 5,000,000 or more population.

(A) Four monitoring periods per year, dual sample sets must be taken every 90 days. 20 dual samples sets must be collected per monitoring period.

(B) Eight dual sample sets must be taken at the high TTHM locations in the distribution system.

(C) Seven dual sample sets must be taken at the high HAA5 locations in the distribution system.

(D) Five dual sample sets must be taken at an existing R309-210-8 compliance location.

(ix) Ground water systems serving less than 500.

(A) One monitoring period per year. Two dual samples sets must be collected per monitoring period.

(B) One dual sample set must be taken at the high TTHM location in the distribution system.

(C) One dual sample set must be taken at the high HAA5 location in the distribution system.

(x) Ground water systems serving between 500 to 9,999 population.

(A) One monitoring period per year. Two dual samples sets must be collected per monitoring period.

(B) One dual sample set must be taken at the high TTHM location in the distribution system.

(C) One dual sample set must be taken at the high HAA5 location in the distribution system.

(xi) Ground water systems serving between 10,000 to 99,999 population.

(A) Four monitoring periods per year, dual sample sets must be taken every 90 days. Four dual samples sets must be collected per monitoring period.

(B) Two dual sample sets must be taken at the high TTHM locations in the distribution system.

(C) One dual sample set must be taken at the high HAA5 locations in the distribution system.

(D) One dual sample set must be taken at an existing R309-210-8 compliance location.

(xii) Ground water systems serving between 100,000 to 499,999 population.

(A) Four monitoring periods per year, dual sample sets must be taken every 90 days. Six dual samples sets must be collected per monitoring period.

(B) Three dual sample sets must be taken at the high TTHM locations in the distribution system.

(C) Two dual sample sets must be taken at the high HAA5 locations in the distribution system.

(D) One dual sample set must be taken at an existing R309-210-8 compliance location.

(xiii) Ground water systems serving 500,000 or greater population.

(A) Four monitoring periods per year, dual sample sets must be taken every 90 days. Eight dual samples sets must be collected per monitoring period.

(B) Three dual sample sets must be taken at the high TTHM locations in the distribution system.

(C) Three dual sample sets must be taken at the high HAA5 locations in the distribution system.

(D) Two dual sample sets must be taken at an existing R309-210-8 compliance location.

(xiv) All systems must monitor during month of highest DBP concentrations.

(xv) Systems on quarterly monitoring must take dual sample sets every 90 days at each monitoring location, except for subpart H systems serving 500-3,300. Systems on annual monitoring and subpart H systems serving 500-3,300 are required to take individual TTHM and HAA5 samples (instead of a dual sample set) at the locations with the highest TTHM and HAA5 concentrations, respectively. Only one location with a dual sample set per monitoring period is needed if highest

TTHM and HAA5 concentrations occur at the same location, and month, if monitored annually).

(c) The water system must recommend R309-210-10 compliance monitoring locations based on standard monitoring results, system specific study results, and R309-210-8 compliance monitoring results. The water system must follow the protocol in paragraphs (c)(i) through (c)(viii) of this section. If required to monitor at more than eight locations, the water system must repeat the protocol as necessary. If the water system do not have existing R309-210-8 compliance monitoring results or if the water system do not have enough existing R309-210-8 compliance monitoring results, the water system must repeat the protocol, skipping the provisions of paragraphs (c)(iii) and (c)(vii) of this section as necessary, until the water system have identified the required total number of monitoring locations.

(i) Location with the highest TTHM LRAA not previously selected as a R309-210-10 monitoring location.

(ii) Location with the highest HAA5 LRAA not previously selected as a R309-210-10 monitoring location.

(iii) Existing R309-210-8 average residence time compliance monitoring location (maximum residence time compliance monitoring location for ground water systems) with the highest HAA5 LRAA not previously selected as a R309-210-10 monitoring location.

(iv) Location with the highest TTHM LRAA not previously selected as a R309-210-10 monitoring location.

(v) Location with the highest TTHM LRAA not previously selected as a R309-210-10 monitoring location.

(vi) Location with the highest HAA5 LRAA not previously selected as a R309-210-10 monitoring location.

(vii) Existing R309-210-8 average residence time compliance monitoring location (maximum residence time compliance monitoring location for ground water systems) with the highest TTHM LRAA not previously selected as a R309-210-10 monitoring location.

(viii) Location with the highest HAA5 LRAA not previously selected as a R309-210-10 monitoring location.

(d) The water system may recommend locations other than those specified in paragraph (c) of this section if the water system include a rationale for selecting other locations. If the Director approves the alternate locations, the water system must monitor at these locations to determine compliance under R309-210-10 of this part.

(e) The recommended schedule must include R309-210-10 monitoring during the peak historical month for TTHM and HAA5 concentration, unless the Director approves another month. Once the water system have identified the peak historical month, and if the water system is required to conduct routine monitoring at least quarterly, the water system must schedule R309-210-10 compliance monitoring at a regular frequency of every 90 days or fewer.

R309-210-10. Disinfection Byproducts - Stage 2 Requirements.

(1) General requirements.

(a) General. The regulations in this sub-section establish monitoring and other requirements for achieving compliance with maximum contaminant levels based on locational running annual averages (LRAA) for total trihalomethanes (TTHM) and haloacetic acids (five)(HAA5), and for achieving compliance with maximum residual disinfectant residuals for chlorine and chloramine for certain consecutive systems.

(b) Applicability. The water system is subject to these requirements if the system is a community water system or a non-transient non-community water system that uses a primary or residual disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light.

(c) Schedule. The water system must comply with the requirements in this subpart on the schedule in the following sub-paragraphs (c)(i) through (vi) based on the system type.

(i) For water systems that are not part of a combined distribution system and systems that serve the largest population in the combined distribution system.

(A) For water systems that serve a population greater than or equal to 100,000 the water system must comply with R309-210-10 monitoring by April 1, 2012.

(B) For water systems that serve a population from 50,000 to 99,999 the water system must comply with R309-210-10 monitoring by October 1, 2012.

(C) For water systems that serve a population from 10,000 to 49,999 the water system must comply with R309-210-10 monitoring by October 1, 2013.

(D) For water systems that serve a population less than 10,000 the water system must comply with R309-210-10 monitoring by October 1, 2013 if no Cryptosporidium monitoring is required under R309-215-15(2)(a)(iv) or October 1, 2014 if Cryptosporidium monitoring is required under R309-215-15(a)(iv) or (a)(vi).

(ii) For other water systems that are part of a combined distribution system:

(A) For wholesale systems or consecutive systems the water system must comply with R309-210-10 monitoring at the same time as the system with the earliest compliance date in the combined distribution system.

(iii) The Director may grant up to an additional 24 months for compliance with MCLs and operational evaluation levels if the water system requires capital improvements to comply with an MCL.

(iv) The monitoring frequency is specified in R309-210-10(2)(a)(ii).

(A) If the water system is required to conduct quarterly monitoring, the water system must begin monitoring in the first full calendar quarter that includes the compliance date in paragraph (c).

(B) If the water system is required to conduct monitoring at a frequency that is less than quarterly, the water system must begin monitoring in the calendar month recommended in the IDSE report prepared under R309-210-9(2) or R309-210-9(3) or the calendar month identified in the R309-210-10 monitoring plan developed under R309-210-10(3) no later than 12 months after the compliance date in R309-210-10(1)(c).

(v) If the water system is required to conduct quarterly monitoring, the water system must make compliance calculations at the end of the fourth calendar quarter that follows the compliance date and at the end of each subsequent quarter (or earlier if the LRAA calculated based on fewer than four quarters of data would cause the MCL to be exceeded regardless of the monitoring results of subsequent quarters). If the water system is required to conduct monitoring at a frequency that is less than quarterly, the water system must make compliance calculations beginning with the first compliance sample taken after the compliance date.

(vi) For the purpose of the schedule in this paragraph (c), the Director may determine that the combined distribution system does not include certain consecutive systems based on factors such as receiving water from a wholesale system only on an emergency basis or receiving only a small percentage and small volume of water from a wholesale system. The Director may also determine that the combined distribution system does not include certain wholesale systems based on factors such as delivering water to a consecutive system only on an emergency basis or delivering only a small percentage and small volume of water to a consecutive system.

(d) Monitoring and compliance.

(i) Systems required to monitor quarterly. To comply with R309-210-10 MCLs in R309-200-5(3)(c)(3)(vi), the water

system must calculate LRAAs for TTHM and HAA5 using monitoring results collected under this sub-section and determine that each LRAA does not exceed the MCL. If the water system fails to complete four consecutive quarters of monitoring, the water system must calculate compliance with the MCL based on the average of the available data from the most recent four quarters. If the water system takes more than one sample per quarter at a monitoring location, the water system must average all samples taken in the quarter at that location to determine a quarterly average to be used in the LRAA calculation.

(ii) Systems required to monitor yearly or less frequently. To determine compliance with R309-210-10 MCLs in R309-200-5(3)(c)(3)(vi), the water system must determine that each sample taken is less than the MCL. If any sample exceeds the MCL, the water system must comply with the requirements of R309-210-10(6). If no sample exceeds the MCL, the sample result for each monitoring location is considered the LRAA for that monitoring location.

(e) Violation. The water system is in violation of the monitoring requirements for each quarter that a monitoring result would be used in calculating an LRAA if the water system fail to monitor.

(2) Routine monitoring.

(a) Monitoring.

(i) If the water system submitted an IDSE report, the water system must begin monitoring at the locations and months the water system have recommended in the IDSE report submitted under R309-210-9(6) following the schedule in R309-210-10(1)(c), unless the Director requires other locations or additional locations after its review. If the water system submitted a 40/30 certification under R309-210-9(4) or the water system qualified for a very small system waiver under R309-210-9(5) or the water system is a non-transient non-community water system serving less than 10,000, the water system must monitor at the location(s) and dates identified in the monitoring plan in R309-210-8(5), updated as required by R309-210-10(3).

(ii) The water system must monitor at no fewer than the number of locations identified in this paragraph (a)(ii).

(A) Surface water systems serving less than 500 shall have one monitoring period per year and shall collect two dual samples sets per monitoring period.

(B) Surface water systems serving between 500 to 3,300 shall have four monitoring periods per year and shall collect two dual samples sets per monitoring period.

(C) Surface water systems serving between 3,301 to 9,999 population shall have four monitoring periods per year and shall collect two dual samples sets per monitoring period.

(D) Surface water systems serving between 10,000 to 49,999 population shall have four monitoring periods per year and shall collect four dual samples sets per monitoring period.

(E) Surface water systems serving between 50,000 to 249,999 population shall have four monitoring periods per year and shall collect eight dual samples sets per monitoring period.

(F) Surface water systems serving between 250,000 to 999,999 population shall have four monitoring periods per year and shall collect 12 dual samples per monitoring period.

(G) Surface water systems serving between 1,000,000 to 4,999,999 population shall have four monitoring periods per year and shall collect 16 dual samples sets per monitoring period.

(H) Surface water systems serving 5,000,000 or more population shall have four monitoring periods per year and shall collect 20 dual samples sets per monitoring period.

(I) Ground water systems serving less than 500 shall have one monitoring period per year and shall collect two dual samples sets per monitoring period.

(J) Ground water systems serving between 500 to 9,999

population shall have one monitoring period per year and shall collect two dual samples sets per monitoring period.

(K) Ground water systems serving between 10,000 to 99,999 population shall have four monitoring periods per year and shall collect four dual samples sets per monitoring period.

(L) Ground water systems serving between 100,000 to 499,999 population shall have four monitoring periods per year and shall collect six dual samples sets per monitoring period.

(M) Ground water systems serving 500,000 or greater population shall have four monitoring periods per year and shall collect eight dual samples sets per monitoring period.

(N) All systems must monitor during month of highest DBP concentrations.

(O) Systems on quarterly monitoring must take dual sample sets every 90 days at each monitoring location, except for surface water systems serving 500-3,300. Systems on annual monitoring and surface water systems serving 500-3,300 are required to take individual TTHM and HAA5 samples (instead of a dual sample set) at the locations with the highest TTHM and HAA5 concentrations, respectively. Only one location with a dual sample set per monitoring period is needed if highest TTHM and HAA5 concentrations occur at the same location (and month, if monitored annually).

(iii) If the water system is an undisinfected system that begins using a disinfectant other than UV light after the dates in R309-210-9 for complying with the Initial Distribution System Evaluation requirements, the water system must consult with the Director to identify compliance monitoring locations for this sub-section. The water system must then develop a monitoring plan under R309-210-10(3) that includes those monitoring locations.

(b) Analytical methods. The water system must use an approved method listed in R309-200-4(3) for TTHM and HAA5 analyses in this sub-section. Analyses must be conducted by laboratories that have received certification by EPA or the Director as specified in R309-200-4(3).

(3) Stage 2 monitoring plan.

(a)(i) The water system must develop and implement a monitoring plan to be kept on file for Director and public review. The monitoring plan must contain the elements in paragraphs (a)(i)(A) through (a)(i)(D) of this section and be complete no later than the date the water system conduct the initial monitoring under this sub-section.

(A) Monitoring locations;

(B) Monitoring dates;

(C) Compliance calculation procedures; and

(D) Monitoring plans for any other systems in the combined distribution system if the Director has reduced monitoring requirements under the Director authority in R309-105-5(2).

(ii) If the water system were not required to submit an IDSE report under either R309-210-9(2) or R309-210-9(3), and the water system do not have sufficient R309-210-8 monitoring locations to identify the required number of R309-210-10 compliance monitoring locations indicated in R309-210-9(6)(b), the water system must identify additional locations by alternating selection of locations representing high TTHM levels and high HAA5 levels until the required number of compliance monitoring locations have been identified. The water system must also provide the rationale for identifying the locations as having high levels of TTHM or HAA5. If the water system have more R309-210-8 monitoring locations than required for R309-210-10 compliance monitoring in R309-210-9(6)(b), the water system must identify which locations the water system will use for R309-210-10 compliance monitoring by alternating selection of locations representing high TTHM levels and high HAA5 levels until the required number of R309-210-10 compliance monitoring locations have been identified.

(b) If the water system is a surface water system serving

greater than 3,300 people, the water system must submit a copy of the monitoring plan to the Director prior to the date the water system conduct the initial monitoring under this sub-section, unless the IDSE report submitted under R309-210-9 contains all the information required by this section.

(c) The water system may revise the monitoring plan to reflect changes in treatment, distribution system operations and layout (including new service areas), or other factors that may affect TTHM or HAA5 formation, or for Director-approved reasons, after consultation with the Director regarding the need for changes and the appropriateness of changes. If the water system changes monitoring locations, the water system must replace existing compliance monitoring locations with the lowest LRAA with new locations that reflect the current distribution system locations with expected high TTHM or HAA5 levels. The Director may also require modifications in the monitoring plan. If the water system is a surface water system serving greater than 3,300 people, the water system must submit a copy of the modified monitoring plan to the Director prior to the date the water system is required to comply with the revised monitoring plan.

(4) Reduced monitoring.

(a) The water system may reduce monitoring to the level specified in this paragraph (a) any time the LRAA is equal to or less than 0.040 mg/L for TTHM and equal to or less than 0.030 mg/L for HAA5 at all monitoring locations. The water system may only use data collected under the provisions of this sub-section or R309-210-8 to qualify for reduced monitoring. In addition, the source water annual average TOC level, before any treatment, must be less than or equal to 4.0 mg/L at each treatment plant treating surface water or ground water under the direct influence of surface water, based on monitoring conducted under either R309-210-8(2)(a)(iii) or R309-215-12.

(i) Surface water systems serving a population less than 500. Monitoring reduction

(A) Monitoring may not be reduced.

(ii) Surface water systems serving between 500 to 3,300 population.

(A) One monitoring periods per year. 1 TTHM and 1 HAA5 sample must be collected per monitoring period.

(B) One sample at the location and during the quarter with the highest TTHM single measurement in the distribution system.

(C) One sample at the location and during the quarter with the highest HAA5 single measurement in the distribution system.

(D) Only one dual sample set per year is required if the highest TTHM and HAA5 measurements occurred at the same location and quarter.

(iii) Surface water systems serving between 3,301 to 9,999 population.

(A) One monitoring period per year. Two dual samples sets must be collected per monitoring period.

(B) One dual sample set at the location and during the quarter with the highest TTHM single measurement in the distribution system.

(C) One dual sample set at the location and during the quarter with the highest HAA5 single measurement in the distribution system.

(iv) Surface water systems serving between 10,000 to 49,999 population.

(A) Four monitoring periods per year. Two dual samples sets must be collected per monitoring period.

(B) One dual sample set must be taken at the location of the highest TTHM LRAAs.

(C) One dual sample set must be taken at the location of the highest HAA5 LRAAs.

(v) Surface water systems serving between 50,000 to 249,999 population.

(A) Four monitoring periods per year. Four dual samples sets must be collected per monitoring period.

(B) A dual sample set must be taken at each of the locations of the two highest TTHM LRAAs.

(C) A dual sample set must be taken at each of the locations of the two highest HAA5 LRAAs.

(vi) Surface water systems serving between 250,000 to 999,999 population.

(A) Four monitoring periods per year. Six dual samples sets must be collected per monitoring period.

(B) A dual sample set must be taken at each of the locations of the three highest TTHM LRAAs.

(C) A dual sample set must be taken at each of the locations of the three highest HAA5 LRAAs.

(vii) Surface water systems serving between 1,000,000 to 4,999,999 population.

(A) Four monitoring periods per year. Eight dual samples sets must be collected per monitoring period.

(B) A dual sample set must be taken at each of the locations of the four highest TTHM LRAAs.

(C) A dual sample set must be taken at each of the locations of the four highest HAA5 LRAAs.

(viii) Surface water systems serving 5,000,000 or more population.

(A) Four monitoring periods per year. 10 dual samples sets must be collected per monitoring period.

(B) A dual sample set must be taken at each of the locations of the five highest TTHM LRAAs.

(C) A dual sample set must be taken at each of the locations of the five highest HAA5 LRAAs.

(ix) Ground water systems serving less than 500.

(A) One monitoring period every three years. 1 TTHM and 1 HAA5 sample must be collected per monitoring period.

(B) One sample at the location and during the quarter with the highest TTHM single measurement in the distribution system.

(C) One sample at the location and during the quarter with the highest HAA5 single measurement in the distribution system.

(D) Only one dual sample set per year is required if the highest TTHM and HAA5 measurements occurred at the same location and quarter.

(x) Ground water systems serving between 500 to 9,999 population.

(A) One monitoring period per year. 1 TTHM and 1 HAA5 sample must be collected per monitoring period.

(B) One sample at the location and during the quarter with the highest TTHM single measurement in the distribution system.

(C) One sample at the location and during the quarter with the highest HAA5 single measurement in the distribution system.

(D) Only one dual sample set per year is required if the highest TTHM and HAA5 measurements occurred at the same location and quarter.

(xi) Ground water systems serving between 10,000 to 99,999 population.

(A) One monitoring period per year. Two dual samples sets must be collected per monitoring period.

(B) One dual sample set at the location and during the quarter with the highest TTHM single measurement in the distribution system.

(C) One dual sample set at the location and during the quarter with the highest HAA5 single measurement in the distribution system.

(xii) Ground water systems serving between 100,000 to 499,999 population.

(A) Four monitoring periods per year. Two dual samples sets must be collected per monitoring period.

(B) One dual sample set must be taken at the location of the highest TTHM LRAAs.

(C) One dual sample set must be taken at the location of the highest HAA5 LRAAs.

(xiii) Ground water systems serving 500,000 or greater population.

(A) Four monitoring periods per year. Four dual samples sets must be collected per monitoring period.

(B) A dual sample set must be taken at each of the locations of the two highest TTHM LRAAs.

(C) A dual sample set must be taken at each of the locations of the two highest HAA5 LRAAs.

(xiv) Systems on quarterly monitoring must take dual sample sets every 90 days.

(b) The water system may remain on reduced monitoring as long as the TTHM LRAA less than or equal to 0.040 mg/L and the HAA5 LRAA less than or equal to 0.030 mg/L at each monitoring location (for systems with quarterly reduced monitoring) or each TTHM sample less than or equal to 0.060 mg/L and each HAA5 sample less than or equal to 0.045 mg/L (for systems with annual or less frequent monitoring). In addition, the source water annual average TOC level, before any treatment, must be less than or equal to 4.0 mg/L at each treatment plant treating surface water or ground water under the direct influence of surface water, based on monitoring conducted under either R309-210-8(2)(a)(iii) or R309-215-12.

(c) If the LRAA based on quarterly monitoring at any monitoring location exceeds either 0.040 mg/L for TTHM or 0.030 mg/L for HAA5 or if the annual (or less frequent) sample at any location exceeds either 0.060 mg/L for TTHM or 0.045 mg/L for HAA5, or if the source water annual average TOC level, before any treatment, is greater than 4.0 mg/L at any treatment plant treating surface water or ground water under the direct influence of surface water, the water system must resume routine monitoring under R309-210-10(2) or begin increased monitoring if R309-210-10(6) applies.

(d) The Director may return the system to routine monitoring at the Director's discretion.

(5) Additional requirements for consecutive systems.

If the water system is a consecutive system that does not add a disinfectant but delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light, the water system must comply with analytical and monitoring requirements for chlorine and chloramines in R309-200-4(3) and the compliance requirements in R309-210-8(6)(c)(i) beginning April 1, 2009, unless required earlier by the Director, and report monitoring results under R309-105-16(2)(c).

(6) Conditions requiring increased monitoring.

(a) If the water system is required to monitor at a particular location annually or less frequently than annually under R309-210-10(2) or R309-210-10(4), the water system must increase monitoring to dual sample sets once per quarter (taken every 90 days) at all locations if a TTHM sample is greater than 0.080 mg/L or a HAA5 sample is greater than 0.06 mg/L at any location.

(b) The water system is in violation of the MCL when the LRAA exceeds the R309-210-10 MCLs in R309-200-5(3)(c)(vi), calculated based on four consecutive quarters of monitoring (or the LRAA calculated based on fewer than four quarters of data if the MCL would be exceeded regardless of the monitoring results of subsequent quarters). The water system is in violation of the monitoring requirements for each quarter that a monitoring result would be used in calculating an LRAA if the water system fail to monitor.

(c) The water system may return to routine monitoring once the water system have conducted increased monitoring for at least four consecutive quarters and the LRAA for every monitoring location is less than or equal to 0.060 mg/L for TTHM and less than or equal to 0.045 mg/L for HAA5.

(7) Operational evaluation levels.

(a) The water system have exceeded the operational evaluation level at any monitoring location where the sum of the two previous quarters' TTHM results plus twice the current quarter's TTHM result, divided by 4 to determine an average, exceeds 0.080 mg/L, or where the sum of the two previous quarters' HAA5 results plus twice the current quarter's HAA5 result, divided by 4 to determine an average, exceeds 0.060 mg/L.

(b)(i) If the water system exceeds the operational evaluation level, the water system must conduct an operational evaluation and submit a written report of the evaluation to the Director no later than 90 days after being notified of the analytical result that causes the water system to exceed the operational evaluation level. The written report must be made available to the public upon request.

(ii) The operational evaluation must include an examination of system treatment and distribution operational practices, including storage tank operations, excess storage capacity, distribution system flushing, changes in sources or source water quality, and treatment changes or problems that may contribute to TTHM and HAA5 formation and what steps could be considered to minimize future exceedences.

(A) The water system may request and the Director may allow the water system to limit the scope of the evaluation if the water system is able to identify the cause of the operational evaluation level exceedance.

(B) The request to limit the scope of the evaluation does not extend the schedule in paragraph (b)(i) of this section for submitting the written report. The Director must approve this limited scope of evaluation in writing and the water system must keep that approval with the completed report.

(8) Requirements for remaining on reduced TTHM and HAA5 monitoring based on R309-210-8 results.

The water system may remain on reduced monitoring after the dates identified in R309-210-10(1)(c) for compliance with this sub-section only if the water system qualifies for a 40/30 certification under R309-210-9(4) or have received a very small system waiver under R309-210-9(5), plus the water system meets the reduced monitoring criteria in R309-210-10(4)(a), and the water system does not change or add monitoring locations from those used for compliance monitoring under R309-210-8. If the monitoring locations under this sub-section differ from the monitoring locations under R309-210-8, the water system may not remain on reduced monitoring after the dates identified in R309-210-10(1)(c) for compliance with this sub-section.

(9) Requirements for remaining on increased TTHM and HAA5 monitoring based on R309-210-8 results.

If the water system was on increased monitoring under R309-210-8(2)(a), the water system must remain on increased monitoring until the water system qualifies for a return to routine monitoring under R309-210-10(6)(c). The water system must conduct increased monitoring under R309-210-10(6) at the monitoring locations in the monitoring plan developed under R309-210-10(3) beginning at the date identified in R309-210-10(1)(c) for compliance with this sub-section and remain on increased monitoring until the water system qualifies for a return to routine monitoring under R309-210-10(6)(c).

(10) Reporting and recordkeeping requirements.

(a) Reporting.

(i) The water system must report the following information for each monitoring location to the Director within 10 days of the end of any quarter in which monitoring is required:

(A) Number of samples taken during the last quarter.

(B) Date and results of each sample taken during the last quarter.

(C) Arithmetic average of quarterly results for the last four quarters for each monitoring location (LRAA), beginning at the end of the fourth calendar quarter that follows the compliance

date and at the end of each subsequent quarter. If the LRAA calculated based on fewer than four quarters of data would cause the MCL to be exceeded regardless of the monitoring results of subsequent quarters, the water system must report this information to the Director as part of the first report due following the compliance date or anytime thereafter that this determination is made. If the water system is required to conduct monitoring at a frequency that is less than quarterly, the water system must make compliance calculations beginning with the first compliance sample taken after the compliance date, unless the water system is required to conduct increased monitoring under R309-210-10(6).

(D) Whether, based on R309-200-5(3)(c)(vi) and this sub-section, the MCL was violated at any monitoring location.

(E) Any operational evaluation levels that were exceeded during the quarter and, if so, the location and date, and the calculated TTHM and HAA5 levels.

(ii) If the system is a surface water system seeking to qualify for or remain on reduced TTHM/HAA5 monitoring, the water system must report the following source water TOC information for each treatment plant that treats surface water or ground water under the direct influence of surface water to the Director within 10 days of the end of any quarter in which monitoring is required:

(A) The number of source water TOC samples taken each month during last quarter.

(B) The date and result of each sample taken during last quarter.

(C) The quarterly average of monthly samples taken during last quarter or the result of the quarterly sample.

(D) The running annual average (RAA) of quarterly averages from the past four quarters.

(E) Whether the RAA exceeded 4.0 mg/L.

(iii) The Director may choose to perform calculations and determine whether the MCL was exceeded or the system is eligible for reduced monitoring in lieu of having the system report that information.

(b) Recordkeeping. The water system must retain any R309-210-10 monitoring plans and the R309-210-10 monitoring results as required by R309-105-17.

KEY: drinking water, distribution system monitoring, compliance determinations

May 1, 2016

19-4-104

Notice of Continuation March 13, 2015

R309. Environmental Quality, Drinking Water.**R309-211. Monitoring and Water Quality: Distribution System -- Total Coliform Requirements.****R309-211-1. Purpose.**

The purpose of this rule is to outline the total coliform monitoring and treatment technique requirements for public water systems. This rule applies to all public drinking water systems as specified herein.

R309-211-2. Authority.

This rule is promulgated by the Drinking Water Board as authorized by Title 19, Environmental Quality Code, Chapter 4, Safe Drinking Water Act, Subsection 104 of the Utah Code and in accordance with 63G-3 of the same, known as the Administrative Rulemaking Act.

R309-211-3. Definitions.

Definitions for certain terms used in this rule are given in R309-110 but may be further clarified herein.

R309-211-4. General Monitoring Requirements for All Public Water Systems.**(1) Sample siting plans.**

(a) Systems must develop a written sample siting plan that identifies sampling sites and a sample collection schedule that are representative of water throughout the distribution system. These plans are subject to Director review and revision. Systems must collect total coliform samples according to the written sample siting plan. Monitoring required by R309-211-5 may take place at a customer's premise, dedicated sampling station, or other designated compliance sampling location. Routine and repeat sample sites and any sampling points necessary to meet the requirements of R309-215-16 must be reflected in the sampling plan.

(b) Systems must collect samples at regular time intervals throughout the month, except that systems that use only ground water and serve 4,900 or fewer people may collect all required samples on a single day if they are taken from different sites.

(c) Systems must take at least the minimum number of required samples even if the system has had an E. coli MCL violation or has exceeded the coliform treatment technique triggers in R309-211-8(1).

(d) A system may conduct more compliance monitoring than is required by this rule to investigate potential problems in the distribution system and use monitoring as a tool to assist in uncovering problems. A system may take more than the minimum number of required routine samples and must include the results in calculating whether the coliform treatment technique trigger in R309-211-8(1)(a)(i) and (ii) has been exceeded only if the samples are taken in accordance with the existing sample siting plan and are representative of water throughout the distribution system.

(e) Systems must identify repeat monitoring locations in the sample siting plan. Unless the provisions of paragraphs (1)(e)(i) or (1)(e)(ii) of this section are met, the system must collect at least one repeat sample from the sampling tap where the original total coliform-positive sample was taken, and at least one repeat sample at a tap within five service connections upstream and at least one repeat sample at a tap within five service connections downstream of the original sampling site. If a total coliform-positive sample is at the end of the distribution system, or one service connection away from the end of the distribution system, the system must still take all required repeat samples. However, the Director may allow an alternative sampling location in lieu of the requirement to collect at least one repeat sample upstream or downstream of the original sampling site. Except as provided for in paragraph (1)(e)(ii) of this section, systems required to conduct triggered source water monitoring under R309-215-16(2) must take ground water

source sample(s) in addition to repeat samples required under this rule.

(i) Systems may propose repeat monitoring locations to the Director that the system believes to be representative of a pathway for contamination of the distribution system. A system may elect to specify either alternative fixed locations or criteria for selecting repeat sampling sites on a situational basis in a standard operating procedure (SOP) in its sample siting plan. The system must design its SOP to focus the repeat samples at locations that best verify and determine the extent of potential contamination of the distribution system area based on specific situations. The Director may modify the SOP or require alternative monitoring locations as needed.

(ii) Ground water systems serving 1,000 or fewer people may propose repeat sampling locations to the Director that differentiate potential source water and distribution system contamination (e.g., by sampling at entry points to the distribution system). A ground water system with a single well required to conduct triggered source water monitoring may, with written Director approval, take one of its repeat samples at the monitoring location required for triggered source water monitoring under R309-215-16(2)(a) if the system demonstrates to the Director's satisfaction that the sample siting plan remains representative of water quality in the distribution system. If approved by the Director, the system may use that sample result to meet the monitoring requirements in both R309-215-16(2)(a) and this section.

(A) If a repeat sample taken at the monitoring location required for triggered source water monitoring is E. coli-positive, the system has violated the E. coli MCL and must also comply with R309-215-16(2)(a)(iii). If a system takes more than one repeat sample at the monitoring location required for triggered source water monitoring, the system may reduce the number of additional source water samples required under R309-215-16(2)(a)(iii) by the number of repeat samples taken at that location that were not E. coli-positive.

(B) If a system takes more than one repeat sample at the monitoring location required for triggered source water monitoring under R309-215-16(2)(a), and more than one repeat sample is E. coli-positive, the system has violated the E. coli MCL and must also comply with R309-215-16(3)(a)(i).

(C) If all repeat samples taken at the monitoring location required for triggered source water monitoring are E. coli-negative and a repeat sample taken at a monitoring location other than the one required for triggered source water monitoring is E. coli-positive, the system has violated the E. coli MCL, but is not required to comply with R309-215-16(2)(a)(iii).

(f) The Director may review, revise, and approve, as appropriate, repeat sampling proposed by systems under paragraphs (1)(e)(i) and (ii) of this section. The system must demonstrate that the sample siting plan remains representative of the water quality in the distribution system. The Director may determine that monitoring at the entry point to the distribution system (especially for undisinfected ground water systems) is effective to differentiate between potential source water and distribution system problems.

(2) Special purpose samples. Special purpose samples, such as those taken to determine whether disinfection practices are sufficient following pipe placement, replacement, or repair, must not be used to determine whether the coliform treatment technique trigger has been exceeded. Repeat samples taken pursuant to R309-211-7 are not considered special purpose samples, and must be used to determine whether the coliform treatment technique trigger has been exceeded.

(3) Invalidation of total coliform samples. A total coliform-positive sample invalidated under this paragraph (3) of this section does not count toward meeting the minimum monitoring requirements of this subpart.

(a) The Director may invalidate a total coliform-positive sample only if the conditions of paragraph (3)(a)(i), (ii), or (iii) of this section are met.

(i) The laboratory establishes that improper sample analysis caused the total coliform-positive result.

(ii) The Director, on the basis of the results of repeat samples collected as required under R309-211-7(1), determines that the total coliform-positive sample resulted from a domestic or other non-distribution system plumbing problem. The Director cannot invalidate a sample on the basis of repeat sample results unless all repeat sample(s) collected at the same tap as the original total coliform-positive sample are also total coliform-positive, and all repeat samples collected at a location other than the original tap are total coliform-negative (e.g., a Director cannot invalidate a total coliform-positive sample on the basis of repeat samples if all the repeat samples are total coliform-negative, or if the system has only one service connection).

(iii) The Director has substantial grounds to believe that a total coliform-positive result is due to a circumstance or condition that does not reflect water quality in the distribution system. In this case, the system must still collect all repeat samples required under R309-211-7(1), and use them to determine whether a coliform treatment technique trigger in R309-211-8 has been exceeded. To invalidate a total coliform-positive sample under this paragraph, the decision and supporting rationale must be documented in writing, and approved and signed by the supervisor of the Director who recommended the decision. The Director must make this document available to EPA and the public. The written documentation must state the specific cause of the total coliform-positive sample, and what action the system has taken, or will take, to correct this problem. The Director may not invalidate a total coliform-positive sample solely on the grounds that all repeat samples are total coliform-negative.

(b) A laboratory must invalidate a total coliform sample (unless total coliforms are detected) if the sample produces a turbid culture in the absence of gas production using an analytical method where gas formation is examined (e.g., the Multiple-Tube Fermentation Technique), produces a turbid culture in the absence of an acid reaction in the Presence-Absence (P-A) Coliform Test, or exhibits confluent growth or produces colonies too numerous to count with an analytical method using a membrane filter (e.g., Membrane Filter Technique). If a laboratory invalidates a sample because of such interference, the system must collect another sample from the same location as the original sample within 24 hours of being notified of the interference problem, and have it analyzed for the presence of total coliforms. The system must continue to re-sample within 24 hours and have the samples analyzed until it obtains a valid result. The Director may waive the 24-hour time limit on a case-by-case basis. Alternatively, the Director may implement criteria for waiving the 24-hour sampling time limit to use in lieu of case-by-case extensions.

(4) A public water system that uses inadequately treated surface water or inadequately treated ground water under the direct influence of surface water shall collect and analyze for total coliforms at least one sample each day the turbidity level of the source water exceeds 1 NTU. This sample shall be collected near the first service connection from the source. The system shall collect the sample within 24 hours of the time when the turbidity level was first exceeded. The sample shall be analyzed within 30 hours of collection. Sample results from this coliform monitoring shall be included in determining total coliform compliance for that month. The Director may extend the 24 hour limitation if the system has a logistical problem that is beyond the system's control. In the case of an extension the Director shall specify how much time the system has to collect the sample.

R309-211-5. Routine Monitoring Requirements for Water Systems Serving 1,000 or Fewer People.

(1) General.

(a) The provisions of this section apply to water systems serving 1,000 or fewer people.

(b) Following any total coliform-positive sample taken under the provisions of this section, systems must comply with the repeat monitoring requirements and E. coli analytical requirements in R309-211-7.

(c) Once all monitoring required by this section and R309-211-7 for a calendar month has been completed, systems must determine whether any coliform treatment technique triggers specified in R309-211-8 have been exceeded. If any trigger has been exceeded, systems must complete assessments as required by R309-211-8.

(2) Monitoring frequency for total coliforms. The monitoring frequency for total coliforms is one sample/month.

(3) Seasonal systems.

(a) All seasonal systems must demonstrate completion of a Director-approved start-up procedure, which may include a requirement for startup sampling prior to serving water to the public.

(b) A seasonal system must monitor every month that it is in operation.

(c) The Director may exempt any seasonal system from some or all of the requirements for seasonal systems if the entire distribution system remains pressurized during the entire period that the system is not operating.

(4) Additional routine monitoring the month following a total coliform-positive sample. Systems must collect at least three routine samples during the next month, except that the Director may waive this requirement if the conditions of paragraph 5(4)(a), (b), or (c) of this section are met. Systems may either collect samples at regular time intervals throughout the month or may collect all required routine samples on a single day if samples are taken from different sites. Systems must use the results of additional routine samples in coliform treatment technique trigger calculations under R309-211-8(1).

(a) The Director may waive the requirement to collect three routine samples the next month in which the system provides water to the public if the Director, or an agent approved by the Director, performs a site visit before the end of the next month in which the system provides water to the public. Although a sanitary survey need not be performed, the site visit must be sufficiently detailed to allow the Director to determine whether additional monitoring and/or any corrective action is needed. The Director cannot approve an employee of the system to perform this site visit, even if the employee is an agent approved by the Director to perform sanitary surveys.

(b) The Director may waive the requirement to collect three routine samples the next month in which the system provides water to the public if the Director has determined why the sample was total coliform-positive and has established that the system has corrected the problem or will correct the problem before the end of the next month in which the system serves water to the public. In this case, the Director must document this decision to waive the following month's additional monitoring requirement in writing, have it approved and signed by the supervisor of the Director who recommends such a decision, and make this document available to the EPA and public. The written documentation must describe the specific cause of the total coliform-positive sample and what action the system has taken and/or will take to correct this problem.

(c) The Director may not waive the requirement to collect three additional routine samples the next month in which the system provides water to the public solely on the grounds that all repeat samples are total coliform-negative. If the Director determines that the system has corrected the contamination problem before the system takes the set of repeat samples

required in R309-211-7, and all repeat samples were total coliform-negative, the Director may waive the requirement for additional routine monitoring the next month.

R309-211-6. Routine Monitoring Requirements for Public Water Systems Serving More Than 1,000 People.

(1) General.

(a) The provisions of this section apply to public water systems serving more than 1,000 persons.

(b) Following any total coliform-positive sample taken under the provisions of this section, systems must comply with the repeat monitoring requirements and E. coli analytical requirements in R309-211-7.

(c) Once all monitoring required by this section and R309-211-7 for a calendar month has been completed, systems must determine whether any coliform treatment technique triggers specified in R309-211-8 have been exceeded. If any trigger has been exceeded, systems must complete assessments as required by R309-211-8.

(d) Seasonal systems.

(i) Beginning April 1, 2016, all seasonal systems must demonstrate completion of a Director-approved start-up procedure, which may include a requirement for start-up sampling prior to serving water to the public.

(ii) The Director may exempt any seasonal system from some or all of the requirements for seasonal systems if the entire distribution system remains pressurized during the entire period that the system is not operating.

(2) Monitoring frequency for total coliforms. The monitoring frequency for total coliforms is based on the population served by the system, as follows:

TABLE 211-1

Total Coliform Monitoring Frequency for Public Water Systems

Population served	Minimum number of samples per month
25 to 1,000	1
1,001 to 2,500	2
2,501 to 3,300	3
3,301 to 4,100	4
4,101 to 4,900	5
4,901 to 5,800	6
5,801 to 6,700	7
6,701 to 7,600	8
7,601 to 8,500	9
8,501 to 12,900	10
12,901 to 17,200	15
17,201 to 21,500	20
21,501 to 25,000	25
25,001 to 33,000	30
33,001 to 41,000	40
41,001 to 50,000	50
50,001 to 59,000	60
59,001 to 70,000	70
70,001 to 83,000	80
83,001 to 96,000	90
96,001 to 130,000	100
130,001 to 220,000	120
220,001 to 320,000	150
320,001 to 450,000	180
450,001 to 600,000	210
600,001 to 780,000	240
780,001 to 970,000	270
970,001 to 1,230,000	300
1,230,001 to 1,520,000	330
1,520,001 to 1,850,000	360
1,850,001 to 2,270,000	390
2,270,001 to 3,020,000	420
3,020,001 to 3,960,000	450
3,960,001 or more	480

R309-211-7. Repeat Monitoring and E. coli Requirements.

(1) Repeat monitoring.

(a) If a sample taken under R309-211-5 though R309-211-6 is total coliform-positive, the system must collect a set of repeat samples within 24 hours of being notified of the positive

result. The system must collect no fewer than three repeat samples for each total coliform-positive sample found. The Director may extend the 24-hour limit on a case-by-case basis if the system has a logistical problem in collecting the repeat samples within 24 hours that is beyond its control. Alternatively, the Director may implement criteria for the system to use in lieu of case-by-case extensions. In the case of an extension, the Director must specify how much time the system has to collect the repeat samples. The Director cannot waive the requirement for a system to collect repeat samples in paragraphs (1)(a) through (1)(c) of this section.

(b) The system must collect all repeat samples on the same day, except that the Director may allow a system with a single service connection to collect the required set of repeat samples over a three-day period or to collect a larger volume repeat sample(s) in one or more sample containers of any size, as long as the total volume collected is at least 300 ml.

(c) The system must collect an additional set of repeat samples in the manner specified in paragraphs (1)(a) through (1)(c) of this section if one or more repeat samples in the current set of repeat samples is total coliform-positive. The system must collect the additional set of repeat samples within 24 hours of being notified of the positive result, unless the Director extends the limit as provided in paragraph (1)(a) of this section. The system must continue to collect additional sets of repeat samples until either total coliforms are not detected in one complete set of repeat samples or the system determines that a coliform treatment technique trigger specified in R309-211-8(1) has been exceeded as a result of a repeat sample being total coliform-positive and notifies the Director. If a trigger identified in R309-211-8 is exceeded as a result of a routine sample being total coliform-positive, systems are required to conduct only one round of repeat monitoring for each total coliform-positive routine sample.

(d) After a system collects a routine sample and before it learns the results of the analysis of that sample, if it collects another routine sample(s) from within five adjacent service connections of the initial sample, and the initial sample, after analysis, is found to contain total coliforms, then the system may count the subsequent sample(s) as a repeat sample instead of as a routine sample.

(e) Results of all routine and repeat samples taken under R309-211-5 through R309-211-7 not invalidated by the Director must be used to determine whether a coliform treatment technique trigger specified in R309-211-8 has been exceeded.

(2) Escherichia coli (E. coli) testing.

(a) If any routine or repeat sample is total coliform-positive, the system must analyze that total coliform-positive culture medium to determine if E. coli are present. If E. coli are present, the system must notify the Director by the end of the day when the system is notified of the test result, unless the system is notified of the result after the Director office is closed and the Director does not have either an after-hours phone line or an alternative notification procedure, in which case the system must notify the Director before the end of the next business day.

(b) The Director has the discretion to allow a system, on a case-by-case basis, to forgo E. coli testing on a total coliform-positive sample if that system assumes that the total coliform-positive sample is E. coli-positive. Accordingly, the system must notify the Director as specified in paragraph (2)(a) of this section and the provisions of R309-200-5(6)(b) apply.

R309-211-8. Coliform Treatment Technique Triggers and Assessment Requirements for Protection Against Potential Fecal Contamination.

(1) Treatment technique triggers. Systems must conduct assessments in accordance with paragraph (2) of this section

after exceeding treatment technique triggers in paragraphs (1)(a) and (1)(b) of this section.

(a) Level 1 treatment technique triggers.

(i) For systems taking 40 or more samples per month, the system exceeds 5.0% total coliform-positive samples for the month.

(ii) For systems taking fewer than 40 samples per month, the system has two or more total coliform-positive samples in the same month.

(iii) The system fails to take every required repeat sample after any single total coliform-positive sample.

(b) Level 2 treatment technique triggers.

(i) An E. coli MCL violation, as specified in R309-211-9(1).

(ii) A second Level 1 trigger as defined in paragraph (1)(a) of this section, within a rolling 12-month period, unless the Director has determined a likely reason that the samples that caused the first Level 1 treatment technique trigger were total coliform-positive and has established that the system has corrected the problem.

(2) Requirements for assessments.

(a) Systems must ensure that Level 1 and 2 assessments are conducted in order to identify the possible presence of sanitary defects and defects in distribution system coliform monitoring practices. Level 2 assessments must be conducted by parties approved by the Director.

(b) When conducting assessments, systems must ensure that the assessor evaluates minimum elements that include review and identification of inadequacies in sample sites; sampling protocol; sample processing; atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., small ground water systems); and existing water quality monitoring data. The system must conduct the assessment consistent with any Director directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system.

(c) Level 1 Assessments. A system must conduct a Level 1 assessment consistent with Director requirements if the system exceeds one of the treatment technique triggers in paragraph (1)(a) of this section.

(i) The system must complete a Level 1 assessment as soon as practical after any trigger in paragraph (1)(a) of this section. In the completed assessment form, the system must describe sanitary defects detected, corrective actions completed, and a proposed timetable for any corrective actions not already completed. The assessment form may also note that no sanitary defects were identified. The system must submit the completed Level 1 assessment form to the Director within 30 days after the system learns that it has exceeded a trigger.

(ii) If the Director reviews the completed Level 1 assessment and determines that the assessment is not sufficient (including any proposed timetable for any corrective actions not already completed), the Director must consult with the system. If the Director requires revisions after consultation, the system must submit a revised assessment form to the Director on an agreed-upon schedule not to exceed 30 days from the date of the consultation.

(iii) Upon completion and submission of the assessment form by the system, the Director must determine if the system has identified a likely cause for the Level 1 trigger and, if so, establish that the system has corrected the problem, or has included a schedule acceptable to the Director for correcting the problem.

(d) Level 2 Assessments. A system must ensure that a

Level 2 assessment consistent with Director requirements is conducted if the system exceeds one of the treatment technique triggers in paragraph (1)(b) of this section. The system must comply with any expedited actions or additional actions required by the Director in the case of an E. coli MCL violation.

(i) The system must ensure that a Level 2 assessment is completed by the Director or by a party approved by the Director as soon as practical after any trigger in paragraph (1)(b) of this section. The system must submit a completed Level 2 assessment form to the Director within 30 days after the system learns that it has exceeded a trigger. The assessment form must describe sanitary defects detected, corrective actions completed, and a proposed timetable for any corrective actions not already completed. The assessment form may also note that no sanitary defects were identified.

(ii) The system may conduct Level 2 assessments if the system has staff or management with the certification or qualifications specified by the Director unless otherwise directed by the Director.

(iii) If the Director reviews the completed Level 2 assessment and determines that the assessment is not sufficient (including any proposed timetable for any corrective actions not already completed), the Director must consult with the system. If the Director requires revisions after consultation, the system must submit a revised assessment form to the Director on an agreed-upon schedule not to exceed 30 days.

(iv) Upon completion and submission of the assessment form by the system, the Director must determine if the system has identified a likely cause for the Level 2 trigger and determine whether the system has corrected the problem, or has included a schedule acceptable to the Director for correcting the problem.

(3) Corrective Action. Systems must correct sanitary defects found through either Level 1 or 2 assessments conducted under paragraph (2) of this section. For corrections not completed by the time of submission of the assessment form, the system must complete the corrective action(s) in compliance with a timetable approved by the Director in consultation with the system. The system must notify the Director when each scheduled corrective action is completed.

(4) Consultation. At any time during the assessment or corrective action phase, either the water system or the Director may request a consultation with the other party to determine the appropriate actions to be taken. The system may consult with the Director on all relevant information that may impact on its ability to comply with a requirement of this subpart, including the method of accomplishment, an appropriate timeframe, and other relevant information.

R309-211-9. Violations.

(1) E. coli MCL Violation. A system is in violation of the MCL for E. coli when any of the conditions identified in paragraphs (1)(a) through (1)(d) of this section occur.

(a) The system has an E. coli-positive repeat sample following a total coliform-positive routine sample.

(b) The system has a total coliform-positive repeat sample following an E. coli-positive routine sample.

(c) The system fails to take all required repeat samples following an E. coli-positive routine sample.

(d) The system fails to test for E. coli when any repeat sample tests positive for total coliform.

(2) Treatment technique violation.

(a) A treatment technique violation occurs when a system exceeds a treatment technique trigger specified in R309-211-8(1) and then fails to conduct the required assessment or corrective actions within the timeframe specified in R309-211-8(2) and (3).

(b) A treatment technique violation occurs when a seasonal system fails to complete a Director-approved start-up

procedure prior to serving water to the public.

(3) Monitoring violations.

(a) Failure to take every required routine or additional routine sample in a compliance period is a monitoring violation.

(b) Failure to analyze for *E. coli* following a total coliform-positive routine sample is a monitoring violation.

(4) Reporting violations.

(a) Failure to submit a monitoring report or completed assessment form after a system properly conducts monitoring or assessment in a timely manner is a reporting violation.

(b) Failure to notify the Director following an *E. coli*-positive sample as required by R309-211-7(2)(a) in a timely manner is a reporting violation.

(c) Failure to submit certification of completion of Director-approved start-up procedure by a seasonal system is a reporting violation.

(b) The system must maintain a record of any repeat sample taken that meets Director's criteria for an extension of the 24-hour period for collecting repeat samples as provided for under R309-211-7(1)(a).

KEY: drinking water, distribution system monitoring, total coliform, compliance determinations
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R309-211-10. Invalidation of a Total Coliform Sample.

The invalidation of a total coliform sample result can be made only by the Administrator in accordance with Section 141.21(c)(1)(i), (ii), or (iii) or by the certified laboratory in accordance with R309-211-4(3), with the Administrator acting as the Director.

R309-211-11. Reporting and Recordkeeping.

(1) Reporting.

(a) *E. coli*.

(i) A system must notify the Director by the end of the day when the system learns of an *E. coli* MCL violation, unless the system learns of the violation after the Director's office is closed and the Director does not have either an after-hours phone line or an alternative notification procedure, in which case the system must notify the Director before the end of the next business day, and notify the public in accordance with R309-220.

(ii) A system must notify the Director by the end of the day when the system is notified of an *E. coli*-positive routine sample, unless the system is notified of the result after the Director's office is closed and the Director does not have either an after-hours phone line or an alternative notification procedure, in which case the system must notify the Director before the end of the next business day.

(b) A system that has violated the treatment technique for coliforms in R309-211-8 must report the violation to the Director no later than the end of the next business day after it learns of the violation, and notify the public in accordance with R309-220.

(c) A system required to conduct an assessment under the provisions of R309-211-8 of this part must submit the assessment report within 30 days. The system must notify the Director in accordance with R309-211-8(3) when each scheduled corrective action is completed for corrections not completed by the time of submission of the assessment form.

(d) A system that has failed to comply with a coliform monitoring requirement must report the monitoring violation to the Director within 10 days after the system discovers the violation, and notify the public in accordance with R309-220.

(e) A seasonal system must certify, prior to serving water to the public, that it has complied with the Director-approved start-up procedure.

(2) Recordkeeping.

(a) The system must maintain any assessment form, regardless of who conducts the assessment, and documentation of corrective actions completed as a result of those assessments, or other available summary documentation of the sanitary defects and corrective actions taken under R309-211-8 for Director review. This record must be maintained by the system for a period not less than five years after completion of the assessment or corrective action.

R309. Environmental Quality, Drinking Water.**R309-215. Monitoring and Water Quality: Treatment Plant Monitoring Requirements.****R309-215-1. Purpose.**

The purpose of this rule is to outline the monitoring and reporting requirements for public water systems which treat water prior to providing it for human consumption.

R309-215-2 Authority.

R309-215-3 Definitions.

R309-215-4 General.

R309-215-5 Monitoring Requirements for Groundwater Disinfection.

R309-215-6 Monitoring Requirements for Miscellaneous Treatment Plants.

R309-215-7 Surface Water Treatment Plant Evaluations.

R309-215-8 Surface Water Treatment Plant Monitoring and Reporting.

R309-215-9 Turbidity Monitoring and Reporting.

R309-215-10 Residual Disinfectant Monitoring.

R309-215-11 Waterborne Disease Outbreak.

R309-215-12 Monitoring Requirements for Disinfection Byproducts Precursors (DBPP).

R309-215-13 Treatment Techniques for control of Disinfection Byproducts Precursors (DBPP).

R309-215-14 Disinfection Profiling and Benchmarking.

R309-215-15 Enhanced Treatment for Cryptosporidium (Federal Subpart W).

R309-215-16 Groundwater Rule.

R309-215-2. Authority.

This rule is promulgated by the Drinking Water Board as authorized by Title 19, Environmental Quality Code, Chapter 4, Safe Drinking Water Act, Subsection 104 of the Utah Code and in accordance with 63G-3 of the same, known as the Administrative Rulemaking Act.

R309-215-3. Definitions.

Definitions for certain terms used in this rule are given in R309-110 but may be further clarified herein.

R309-215-4. General.

(1) All public water systems are required to monitor their water to determine if they comply with the requirements for water quality stated in R309-200. In exceptional circumstances the Director may modify the monitoring requirements given herein as is deemed appropriate.

(2) The Director may determine compliance or initiate compliance actions based upon analytical results and other information compiled by authorized representatives.

(3) If the water fails to meet minimum standards, then certain public notification procedures shall be carried out, as outlined in R309-220. Water suppliers shall also keep analytical records in their possession, for a required length of time, as outlined in R309-105-17.

(4) All samples shall be taken at representative sites as specified herein for each contaminant or group of contaminants.

(5) For the purpose of determining compliance, samples may only be considered if they have been analyzed by the State of Utah primacy laboratory or a laboratory certified by the Utah State Health Laboratory.

(6) Measurements for pH, temperature, turbidity and disinfectant residual may, under the direction of the direct responsible operator, be performed by any water supplier or their representative.

(7) All samples shall be marked either: routine, repeat, check or investigative before submission of such samples to a certified laboratory. Routine, repeat, and check samples shall be considered compliance purpose samples.

(8) All sample results can be sent to the Division of

Drinking Water either electronically or in hard copy form.

(9) Unless otherwise required by the Director, the effective dates on which required monitoring shall be initiated are identical to the dates published in 40 CFR 141 on July 1, 2001 by the Office of the Federal Register

(10) Exemptions from monitoring requirements shall only be granted in accordance with R309-105-5.

R309-215-5. Monitoring Requirements for Groundwater Disinfection.

(1) General: Continuous disinfection is recommended for all drinking water sources. Continuous disinfection shall be required of all groundwater sources which do not consistently meet standards of bacteriologic quality. Once required by the Director continuous disinfection shall not be interrupted nor terminated unless so authorized, in writing, by the Director.

(2) Disinfection Reporting: For each disinfection treatment facility, plant management shall report information to the Division as specified in R309-105-16(2)(c).

(3) A water system shall report a malfunction of any facility or equipment such that a detectable residual cannot be maintained throughout the distribution system. The system shall notify the Division as soon as possible, but no later than by the end of the next business day. The system also shall notify the Division by the end of the next business day whether or not the residual was restored to at least 0.2 mg/L within four hours.

R309-215-6. Monitoring Requirements for Miscellaneous Treatment Plants.

(1) Treatment of the drinking water may be required for other than inactivation of microbial contaminants or removal/inactivation of pathogens and viruses. Miscellaneous treatment methods are outlined in R309-535.

(2) The Director may require additional monitoring as necessary to evaluate the treatment process and to ensure the quality of the water. The specific analytes, frequency of monitoring, the reporting frequency and the sampling location for which monitoring may be required shall be determined by the following:

(a) the contaminant of concern for which the treatment process has been installed;

(b) the process control samples required to operate treatment process being used; and

(c) alternative surrogate sampling when it is either quicker or less expensive and still provides the necessary information;

(3) For point-of-use or point-of-entry technology the location of sampling may be at each treatment unit spread out over time.

(4) If monitoring is required, the Director shall provide the report forms and the water system shall report the data as required by R309-105-16(3). Alternate forms may be used as long as prior approval from the Director is obtained.

R309-215-7. Surface Water Treatment Evaluations.

(1) General: Surface water sources or groundwater sources under direct influence of surface water shall be disinfected during the course of required surface water treatment. Disinfection shall not be considered a substitute for inadequate collection facilities. All public water systems which use a treatment technique to treat water obtained in whole or in part from surface water sources or ground water sources under the direct influence of surface water shall monitor the plant's operation and report the results to the Division as indicated in R309-215-7 through R309-215-14. Individual plants will be evaluated in accordance with the criteria outlined in paragraph (2) below. Based on information submitted and/or plant inspections, the plant will receive credit for treatment techniques other than disinfection that remove pathogens, specifically *Giardia lamblia* and viruses. This credit (log

removal) will reduce the required disinfectant "CT" value which the plant shall maintain to assure compliance with R309-200-5(7)(a)(i).

(2) Criteria for Individual Treatment Plant Evaluation: New and existing water treatment plants shall meet specified monitoring and performance criteria in order to ensure that filtration and disinfection are satisfactorily practiced. The monitoring requirements and performance criteria for turbidity and disinfection listed above provide the minimum for the Division to evaluate the plant's efficiency in removing and/or inactivating 99.9 percent (3-log) of *Giardia lamblia* cysts and 99.99 percent (4-log) of viruses as required by R309-505-6(2)(a) and (b).

(3) The Division, upon evaluation of individual raw water sources, surface water or ground water under the direct influence of surface water, may require greater than the 3-log, 4-log removal/inactivation of *Giardia* and viruses respectfully. If a raw water source exhibits an estimated concentration of 1 to 10 *Giardia* cysts per 100 liters, 4 and 5-log removal/inactivation may be required. If the raw water exhibits a concentration of 10 to 100 cysts per 100 liters, 5 and 6-log removal/inactivation may be required.

If a plant decides to recycle any spent filter backwash water, thickener supernatant, or liquids from dewatering processes the Division shall be notified in writing by December 8, 2003 or prior to recycling such waters. Such notification shall include, at a minimum:

(a) A plant schematic showing the origin of all flows which are recycled (including, but not limited to, spent filter backwash water, thickener supernatant, and any liquids from dewatering processes), the hydraulic conveyance used to transport them, and the location where they are reintroduced back into the treatment plant.

(b) Typical recycle flow in gallons per minute (gpm), the highest observed plant flow experienced in the previous year (gpm), design flow for the treatment plant (gpm), and operating capacity approved by the Director for the plant where the Director has made such determinations.

(c) Treatment technique (TT) requirement. Any system that recycles spent filter backwash water, thickener supernatant, or liquids from dewatering processes shall return these flows through the processes of a system's existing conventional or direct filtration system as defined in R309-525 or R309-530 or at an alternate location approved by the Director by or after June 8, 2004. If capital improvements are required to modify the recycle location to meet this requirement, all capital improvements must be completed no later than June 8, 2006.

(4) The Director, upon individual plant evaluation, may assign the treatment techniques (coagulation, flocculation, sedimentation and filtration) credit toward removal of *Giardia* cysts and viruses. The greater the number of barriers in the treatment process, the greater the reduction of pathogens, therefore lessor credit will be given to processes such as direct filtration which eliminate one or more conventional barriers. Plants may monitor turbidity at multiple points in the treatment process as evidence of the performance of an individual treatment technique.

(5) The nominal credit that will be assigned certain conventional processes are outlined in Table 215-1:

TABLE 215-1
CONVENTIONAL PROCESS CREDIT

Process	Log Reduction Credit	
	<i>Giardia</i>	Viruses
Conventional Complete Treatment	2.5	2.0
Direct Filtration	2.0	1.0
Slow Sand Filtration	2.0	2.0
Diatomaceous Earth Filters	2.0	1.0

(6) Upon evaluation of information provided by individual plants or obtained during inspections by Division staff, the Director may increase or decrease the nominal credit assigned individual plants based on that evaluation.

(a) Items which would augment the treatment process and thereby warrant increased credit are:

(i) facilities or means to moderate extreme fluctuations in raw water characteristics;

(ii) sufficient on-site laboratory facilities regularly used to alert operators to changes in raw water quality;

(iii) use of pilot stream facilities which duplicate treatment conditions but allow operators to know results of adjustments much sooner than if only monitoring plant effluent;

(iv) use of additional monitoring methods such as particle size and distribution analysis to achieve greater efficiency in particulate removal;

(v) regular program for preventive maintenance, records of such, and general good housekeeping; or

(vi) adequate staff of well trained and certified plant operators.

(b) Items which would be considered a detriment to the treatment process and thereby warrant decreased credit are:

(i) inadequate staff of trained and certified operators;

(ii) lack of regular maintenance and poor housekeeping; or

(iii) insufficient on-site laboratory facilities.

R309-215-8. Surface Water Treatment Plant Monitoring and Reporting.

Treatment plant management shall report the following to the Division within ten days after the end of each month that the system serves water to the public, except as otherwise noted:

(1) For each day;

(a) if the plant treats water from multiple sources, the sources being utilized (including recycled backwash water) and the ratio for each if blending occurs.

(b) the total volume of water treated by the plant,

(c) the turbidity of the raw water entering the plant,

(d) the pH of the effluent water, measured at or near the monitoring point for disinfectant residual,

(e) the temperature of the effluent water, measured at or near the monitoring point for disinfectant residual,

(f) the type and amount of chemicals used in the treatment process (clearly indicating the weight and active percent of chemical if dry feeders are used, or the percent solution and volume fed if liquid feeders are used),

(g) the high and low temperature and weather conditions (local forecast information may be used, but any precipitation in the watershed should be further described as light, moderate, heavy, or extremely heavy), and

(h) the results of any "jar tests" conducted that day

(2) For each filter, each day;

(a) the rate of water applied to each (gpm/sq.ft.),

(b) the head loss across each (feet of water or psi),

(c) length of backwash (if conducted; in minutes), and

(d) hours of operation since last backwashed.

(3) Annually; certify in writing as required by R309-105-14(1) that when a product containing acrylamide and/or epichlorohydrin is used, the combination of the amount of residual monomer in the polymer and the dosage rate does not exceed the levels specified as follows:

(a) Acrylamide: 0.05%, when dosed at 1 part per million, and

(b) Epichlorohydrin: 0.01%, when dosed at 20 parts per million.

Certification may rely on manufacturers data.

(4) Additional record-keeping for plants that recycle.

The system must collect and retain on file recycle flow information for review and evaluation by the Director beginning June 8, 2004 or upon approval for recycling. As a minimum the

following shall be maintained:

- (a) Copy of the recycle notification and information submitted to the Division under R309-215-7(3).
- (b) List of all recycle flows and the frequency with which they are returned.
- (c) Average and maximum backwash flow rates through the filters and the average and maximum duration of the filter backwash process in minutes.
- (d) Typical filter run length and a written summary of how filter run length is determined.
- (e) The type of treatment provided for the recycle flow.
- (f) Data on the physical dimensions of the equalization and/or treatment units, typical and maximum hydraulic loading rates, type of treatment chemicals used, average dose, frequency of use and frequency at which solids are removed, if applicable.

R309-215-9. Turbidity Monitoring and Reporting.

Public water systems utilizing surface water and ground water under the direct influence of surface water shall monitor for turbidity in accordance with this section. Small surface water systems serving a population less than 10,000 shall monitor in accordance with subsections (1), (2), (3), (5) and (6). Large surface water systems serving 10,000 or more population shall monitor in accordance with subsections (1), (2), (3), (4) and (6).

(1) Routine Monitoring Requirements for Treatment Facilities utilizing surface water sources or ground water sources under the direct influence of surface water.

(a) All public water systems which use a treatment technique to treat water obtained in whole or in part from surface water sources or ground water sources under the direct influence of surface water shall monitor for turbidity at the treatment plant's clearwell outlet. This monitoring shall be independent of the individual filter monitoring required by R309-525-15(4)(b)(vi) and R309-525-15(4)(c)(vii). Where the plant facility does not have an internal clearwell, the turbidity shall be monitored at the inlet to a finished water reservoir external to the plant provided such reservoir receives only water from the treatment plant and, furthermore, is located before any point of consumer connection to the water system. If such external reservoir does not exist, turbidity shall then be monitored at a location immediately downstream of the treatment plant filters.

(b) All treatment plants, with the exception of those utilizing slow sand filtration and other conditions indicated in section (c) below, shall be equipped with continuous turbidity monitoring and recording equipment for which the direct responsible charge operator will validate the continuous measurements for accuracy in accordance with paragraph (d) below. These plants shall continuously record the finished water turbidity of the combined filter effluent as well as each individual filter. All systems shall be equipped to continuously monitor the turbidity at each filter unless the treatment plant is only equipped with two filters and the turbidity is measured at the combined filter effluent (CFE). If there is a failure in continuous monitoring equipment the system shall conduct grab sampling every 4 hours in lieu of continuous monitoring, but for no more than five working days following the failure of equipment. Systems serving less than 10,000 population shall have no more than 14 days to conduct grab samples in lieu of continuous monitoring in order to correct any failing equipment. All surface water systems shall monitor the turbidity results of individual filters at a frequency no greater than every 15 minutes.

(c) Turbidity measurements, as outlined below, shall be reported to the Division within ten days after the end of each month that the system serves water to the public. Systems are required to mark and interpret turbidity values from the recorded charts at the end of each four-hour interval of operation (or

some shorter regular time interval) to determine compliance with the turbidity performance criterion. For systems using slow sand filtration the Director may reduce the sampling frequency to as little as once per day if the Director determines that less frequent monitoring is sufficient to indicate effective filtration performance. For systems serving 500 or fewer persons, the Director may reduce the turbidity sampling frequency to as little as once per day, regardless of the type of filtration treatment used, if the Director determines that less frequent monitoring is sufficient to indicate effective filtration performance.

The following shall be reported and the required percentage achieved for compliance:

(i) The total number of interpreted filtered water turbidity measurements taken during the month;

(ii) The number and percentage of interpreted filtered water turbidity measurements taken during the month which are less than or equal to the turbidity limits specified in R309-200-5(5)(a)(ii) (or increased limit approved by the Director). The percentage of measurements which are less than or equal to the turbidity limit shall be 95 percent or greater for compliance; and

(iii) The date and value of any turbidity measurements taken during the month which exceed 5 NTU. The system shall inform the Division as soon as practical, but no later than 24 hours after the exceedance is known, in accordance with R309-220-6(2)(c) if any turbidity measurements exceed 5 NTU.

(d) The analytical method which shall be followed in making the required determinations shall be Nephelometric Method - Nephelometric Turbidity Unit as set forth in the latest edition of Standard Methods for Examination of Water and Wastewater, 1985, American Public Health Association et al., (Method 214A, pp. 134-136 in the 16th edition). Continuous turbidity monitoring equipment shall be checked for accuracy and recalibrated using methods outlined in the above standard at a minimum frequency of monthly. The direct responsible charge operator will note on the turbidity report form when these recalibrations are conducted. For systems that practice lime softening, the representative combined filter effluent turbidity sample may be acidified prior to analysis with prior approval by the Director as to the protocol.

(2) Procedures if a Filtered Water Turbidity Limit is Exceeded

(a) Resampling -

If an analysis indicates that the turbidity limit has been exceeded, the sampling and measurement shall be confirmed by resampling as soon as practicable and preferably within one hour.

(b) If the result of resampling confirms that the turbidity limit has been exceeded, the system shall collect and have analyzed at least one bacteriologic sample near the first service connection from the source as specified in R309-211-4(4). The system shall collect this bacteriologic sample within 24 hours of the turbidity exceedance. Sample results from this monitoring shall be included in determining bacteriologic compliance for that month.

(c) Initial Notification of the Director -

If the repeat sample confirms that the turbidity limit has been exceeded, the supplier shall report this fact to the Director as soon as practical, but no later than 24 hours after the exceedance is known in accordance with the public notification requirements under R309-220-6(2)(c). This reporting is in addition to reporting the incident on any monthly reports.

(3) For the purpose of individual plant evaluation and establishment of pathogen removal credit for the purpose of lowering the required "CT" value assigned a plant, plant management may do additional turbidity monitoring at other points to satisfy criteria in R309-215-7(2).

(4) Additional reporting and recordkeeping requirements for large surface water systems (serving greater than 10,000

population) reporting and recordkeeping requirements.

In addition to the reporting and recordkeeping requirements sub-sections (1), (2) and (3) above, a large surface water system that provides conventional filtration treatment or direct filtration shall report monthly to the Division the information specified in paragraphs (a) and (b) of this section. In addition to the reporting and recordkeeping requirements above, a public water system subject to the requirements of this subpart that provides filtration approved under R309-530-8 or R309-530-9 shall report monthly to the Division the information specified in paragraphs (a) of this section. The reporting in paragraph (a) of this section is in lieu of the reporting specified above.

(a) Turbidity measurements, as required in R309-200-5(5)(a), shall be reported within 10 days after the end of each month the system serves water to the public. Information that shall be reported includes:

(i) The total number of filtered water turbidity measurements taken during the month.

(ii) The number and percentage of filtered water turbidity measurements taken during the month which are less than or equal to 0.3 NTU or those levels established under R309-200-5(5)(a)(ii).

(iii) The date and value of any turbidity measurements taken during the month which exceed 1 NTU for systems using conventional filtration treatment or direct filtration, or which exceed the maximum level set by the Director under R309-530-8 or R309-530-9.

(b) Systems shall maintain the results of individual filter monitoring taken under R309-215-9(1)(b) for at least three years. Systems shall record the results of individual filter monitoring every 15 minutes. Systems shall report that they have conducted individual filter turbidity monitoring within 10 days after the end of each month the system serves water to the public. Systems shall report individual filter turbidity measurement results within 10 days after the end of each month the system serves water to the public only if measurements demonstrate one or more of the conditions in paragraphs (b)(i) through (iv) of this section. Systems that use lime softening may apply to the Director for alternative exceedance levels for the levels specified in paragraphs (b)(i) through (iv) of this section if they can demonstrate that higher turbidity levels in individual filters are due to lime carryover only and not due to degraded filter performance.

(i) For any individual filter that has a measured turbidity level of greater than 1.0 NTU in two consecutive measurements taken 15 minutes apart, the system shall report the filter number, the turbidity measurement, and the date(s) on which the exceedance occurred. In addition, the system shall either produce a filter profile for the filter within 7 days of the exceedance (if the system is not able to identify an obvious reason for the abnormal filter performance) and report that the profile has been produced or report the obvious reason for the exceedance.

(ii) For any individual filter that has a measured turbidity level of greater than 0.5 NTU in two consecutive measurements taken 15 minutes apart at the end of the first four hours of continuous filter operation after the filter has been backwashed or otherwise taken offline, the system shall report the filter number, the turbidity, and the date(s) on which the exceedance occurred. In addition, the system shall either produce a filter profile for the filter within 7 days of the exceedance (if the system is not able to identify an obvious reason for the abnormal filter performance) and report that the profile has been produced or report the obvious reason for the exceedance.

(iii) For any individual filter that has a measured turbidity level of greater than 1.0 NTU in two consecutive measurements taken 15 minutes apart at any time in each of three consecutive months, the system shall report the filter number, the turbidity measurement, and the date(s) on which the exceedance occurred.

In addition, the system shall conduct a self-assessment of the filter within 14 days of the exceedance and report that the self-assessment was conducted. The self assessment shall consist of at least the following components: assessment of filter performance; development of a filter profile; identification and prioritization of factors limiting filter performance; assessment of the applicability of corrections; and preparation of a filter self-assessment report.

(iv) For any individual filter that has a measured turbidity level of greater than 2.0 NTU in two consecutive measurements taken 15 minutes apart at any time in each of two consecutive months, the system shall report the filter number, the turbidity measurement, and the date(s) on which the exceedance occurred. In addition, the system shall arrange for and conduct a comprehensive performance evaluation by the Director or a third party approved by the Director no later than 30 days following the exceedance and have the evaluation completed and submitted to the Division no later than 90 days following the exceedance.

(5) Additional reporting and recordkeeping requirements for surface water systems serving less than 10,000 population.

In addition to the reporting and recordkeeping requirements sub-sections (1), (2) and (3) above, a surface water system that provides conventional filtration treatment or direct filtration shall report monthly to the Division the information specified in paragraphs (a) and (b) of this section. In addition to the reporting and recordkeeping requirements above, a public water system subject to the requirements of this subpart that provides filtration approved under R309-530-8 or R309-530-9 shall report monthly to the Division the information specified in paragraphs (a) of this section. The reporting in paragraph (a) of this section is in lieu of the reporting specified above.

(a) Turbidity measurements, as required in R309-200-5(5)(a), shall be reported within 10 days after the end of each month the system serves water to the public. Information that shall be reported includes:

(i) The total number of filtered water turbidity measurements taken during the month.

(ii) The number and percentage of filtered water turbidity measurements taken during the month which are less than or equal to 0.3 NTU or those levels established under R309-200-5(5)(a)(ii).

(iii) The date and value of any turbidity measurements taken during the month which exceed 1 NTU for systems using conventional filtration treatment or direct filtration, or which exceed the maximum level set by the Director under R309-530-8 or R309-530-9.

(b) Systems shall maintain the results of individual filter monitoring taken under R309-215-9(1)(b) for at least three years. Systems shall record the results of individual filter monitoring every 15 minutes. Systems shall report that they have conducted individual filter turbidity monitoring within 10 days after the end of each month the system serves water to the public. Systems shall report individual filter turbidity measurement results within 10 days after the end of each month the system serves water to the public only if measurements demonstrate one or more of the conditions in paragraphs (b)(i) through (iv) of this section. Systems that use lime softening may apply to the Director for alternative exceedance levels for the levels specified in paragraphs (b)(i) through (iv) of this section if they can demonstrate that higher turbidity levels in individual filters are due to lime carryover only and not due to degraded filter performance.

(i) For any individual filter (or CFE for systems with 2 filters that monitor CFE in lieu of individual filters) that has a measured turbidity level of greater than 1.0 NTU in two consecutive measurements taken 15 minutes apart, the system shall report the filter number(s), the corresponding date(s), the turbidity values which exceeded 1.0 NTU, and the cause (if

known) for the exceedance(s), to the Director by the 10th of the following month.

(ii) If a system was required to report to the Director for three months in a row and turbidity exceeded 1.0 NTU in two consecutive recordings taken 15 minutes apart at the same filter (or CFE for systems with 2 filters that monitor CFE in lieu of individual filters), the system shall conduct a self-assessment of the filter within 14 days of the day the filter exceeded 1.0 NTU in two consecutive measurements for the third straight month unless a CPE as specified in paragraph (iii) of this section was required. Systems with 2 filters that monitor CFE in lieu of individual filters must conduct a self assessment on both filters. The self-assessment must consist of at least the following components: assessment of filter performance; development of a filter profile; identification and prioritization of factors limiting filter performance; assessment of the applicability of corrections; and preparation of a filter self-assessment report. If a self-assessment is required, the date that it was triggered and the date that it was completed.

(iii) If a system was required to report to the Director for two months in a row and turbidity exceeded 2.0 NTU in two consecutive measurements taken 15 minutes apart at the same filter (or CFE for systems with 2 filters that monitor CFE in lieu of individual filters), the system shall arrange to have a comprehensive performance evaluation (CPE) conducted by the Director or a third party approved by the Director no later than 60 days following the day the filter exceeded 2.0 NTU in two consecutive measurements for the second straight month. If a CPE is required, the system must report a CPE required and the date it was triggered. If a CPE has been completed by the Director or a third party approved by the Director within the 12 prior months or the system and Division are jointly participating in an ongoing Comprehensive Technical Assistance (CTA) project at the system, a new CPE is not required. If conducted, a CPE must be completed and submitted to the Division no later than 120 days following the day the filter exceeded 2.0 NTU in two consecutive measurements for the second straight month.

(6) Additional reporting requirements.

(a) If at any time the turbidity exceeds 1 NTU in representative samples of filtered water in a system using conventional filtration treatment or direct filtration, the system shall inform the Division as soon as possible, but no later than the end of the next business day.

(b) If at any time the turbidity in representative samples of filtered water exceeds the maximum level set by the Director under R309-530-8 or R309-530-9 for filtration technologies other than conventional filtration treatment, direct filtration, slow sand filtration, or diatomaceous earth filtration, the system shall inform the Division as soon as possible, but no later than the end of the next business day.

R309-215-10. Residual Disinfectant.

Treatment plant management shall continuously monitor disinfectant residuals and report the following to the Division within ten days after the end of each month that the system serves water to the public, except as otherwise noted:

(1) For each day, the lowest measurement of residual disinfectant concentration in mg/L in water entering the distribution system, except that if there is a failure in the continuous monitoring equipment, grab sampling every 4 hours may be conducted in lieu of continuous monitoring, but for no more than 5 working days following the failure of the equipment. Systems serving 3,300 or fewer persons may take grab samples in lieu of providing continuous monitoring on an ongoing basis at the frequencies listed in Table 215.2 below:

Less than 500	1
501 to 1,000	2
1,001 to 2,500	3
2,501 to 3,300	4

Note: The day's samples cannot be taken at the same time. The sampling intervals are subject to Director's review and approval.

(2) The date and duration of each period when the residual disinfectant concentration in water entering the distribution system fell below 0.2 mg/L and when the Division was notified of the occurrence. The system shall notify the Division as soon as possible, but no later than by the end of the next business day. The system also shall notify the Division by the end of the next business day whether or not the residual was restored to at least 0.2 mg/L within four hours.

(3) The following information on the samples taken in the distribution system in conjunction with total coliform monitoring pursuant to R309-211 and R309-210-8(3)(a)(i):

(a) number of instances where the residual disinfectant concentration is measured;

(b) number of instances where the residual disinfectant concentration is not measured but heterotrophic bacteria plate count (HPC) is measured;

(c) number of instances where the residual disinfectant concentration is measured but not detected and no HPC is measured;

(d) number of instances where no residual disinfectant concentration is detected and where HPC is greater than 500/ml;

(e) number of instances where the residual disinfectant concentration is not measured and HPC is greater than 500/ml;

(f) for the current and previous month the system serves water to the public, the value of "V" in the formula, $V = ((c+d+e)/(a+b)) \times 100$, where a = the value in sub-section (a) above, b = the value in sub-section (b) above, c = the value in sub-section (c) above, d = the value in sub-section (d) above, and e = the value in sub-section (e) above.

R309-215-11. Waterborne Disease Outbreak.

Each public water system, upon discovering that a waterborne disease outbreak as defined in R309-110 potentially attributable to their water system has occurred, shall report that occurrence to the Division as soon as possible, but no later than by the end of the next business day.

R309-215-12. Monitoring Requirements for Disinfection Byproducts Precursors (DBPP).

(1) Routine monitoring. Surface water systems which use conventional filtration treatment (as defined in R309-110) shall monitor each treatment plant for TOC no later than the point of combined filter effluent turbidity monitoring and representative of the treated water. All systems required to monitor under this paragraph (1) shall also monitor for TOC in the source water prior to any treatment at the same time as monitoring for TOC in the treated water. These samples (source water and treated water) are referred to as paired samples. At the same time as the source water sample is taken, all systems shall monitor for alkalinity in the source water prior to any treatment. Systems shall take one paired sample and one source water alkalinity sample per month per plant at a time representative of normal operating conditions and influent water quality.

(2) Reduced monitoring. Surface water systems with an average treated water TOC of less than 2.0 mg/L for two consecutive years, or less than 1.0 mg/L for one year, may reduce monitoring for both TOC and alkalinity to one paired sample and one source water alkalinity sample per plant per quarter. The system shall revert to routine monitoring in the month following the quarter when the annual average treated water TOC is greater than or equal to 2.0 mg/L.

(3) Compliance shall be determined as specified by R309-

TABLE 215-2

RESIDUAL GRAB SAMPLE FREQUENCY System size by population	Samples/day
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215-13(3). Systems may begin monitoring to determine whether Step 1 TOC removals can be met 12 months prior to the compliance date for the system. This monitoring is not required and failure to monitor during this period is not a violation. However, any system that does not monitor during this period, and then determines in the first 12 months after the compliance date that it is not able to meet the Step 1 requirements in R309-215-13(2)(b) and shall therefore apply for alternate minimum TOC removal (Step 2) requirements, is not eligible for retroactive approval of alternate minimum TOC removal (Step 2) requirements as allowed pursuant to R309-215-13(2)(c) and is in violation. Systems may apply for alternate minimum TOC removal (Step 2) requirements any time after the compliance date. For systems required to meet Step 1 TOC removals, if the value calculated under R309-215-13(3)(a)(iv) is less than 1.00, the system is in violation of the treatment technique requirements and shall notify the public pursuant to R309-220, in addition to reporting to the Director pursuant to R309-105-16.

R309-215-13. Treatment Technique for Control of Disinfection Byproduct Precursors (DBPP).

(1) Applicability.

(a) Surface water systems using conventional filtration treatment (as defined in R309-110) shall operate with enhanced coagulation or enhanced softening to achieve the TOC percent removal levels specified in paragraph (2) of this section unless the system meets at least one of the alternative compliance criteria listed in paragraph (1)(b) or (1)(c) of this section.

(b) Alternative compliance criteria for enhanced coagulation and enhanced softening systems. Surface Water Systems using conventional filtration treatment may use the alternative compliance criteria in paragraphs (1)(b)(i) through (vi) of this section to comply with this section in lieu of complying with paragraph (2) of this section. Systems shall still comply with monitoring requirements in R309-215-12.

(i) The system's source water TOC level, measured according to R309-200-4(3), is less than 2.0 mg/L, calculated quarterly as a running annual average.

(ii) The system's treated water TOC level, measured according to R309-200-4(3), is less than 2.0 mg/L, calculated quarterly as a running annual average

(iii) The system's source water TOC level, measured according to R309-200-4(3), is less than 4.0 mg/L, calculated quarterly as a running annual average; the source water alkalinity, measured according to R309-200-4(3), is greater than 60 mg/L (as CaCO₃), calculated quarterly as a running annual average; and either the TTHM and HAA5 running annual averages are no greater than 0.040 mg/L and 0.030 mg/L, respectively; or prior to the effective date for compliance in R309-210-8(1)(a), the system has made a clear and irrevocable financial commitment not later than the effective date for compliance in R309-210-8(1)(a) to use of technologies that will limit the levels of TTHMs and HAA5 to no more than 0.040 mg/L and 0.030 mg/L, respectively. Systems shall submit evidence of a clear and irrevocable financial commitment, in addition to a schedule containing milestones and periodic progress reports for installation and operation of appropriate technologies, to the Director for approval not later than the effective date for compliance in R309-210-8(1)(a). These technologies shall be installed and operating not later than June 30, 2005. Failure to install and operate these technologies by the date in the approved schedule will constitute a violation of National Primary Drinking Water Regulations.

(iv) The TTHM and HAA5 running annual averages are no greater than 0.040 mg/L and 0.030 mg/L, respectively, and the system uses only chlorine for primary disinfection and maintenance of a residual in the distribution system.

(v) The system's source water SUVA, prior to any

treatment and measured monthly according to R309-200-4(3), is less than or equal to 2.0 L/mg-m, calculated quarterly as a running annual average.

(vi) The system's finished water SUVA, measured monthly according to R309-200-4(3), is less than or equal to 2.0 L/mg-m, calculated quarterly as a running annual average.

(c) Additional alternative compliance criteria for softening systems. Systems practicing enhanced softening that cannot achieve the TOC removals required by paragraph (2)(b) of this section may use the alternative compliance criteria in paragraphs (1)(c)(i) and (ii) of this section in lieu of complying with paragraph (2) of this section. Systems shall still comply with monitoring requirements in R309-210-8(4).

(i) Softening that results in lowering the treated water alkalinity to less than 60 mg/L (as CaCO₃), measured monthly according to R309-200-4(3) and calculated quarterly as a running annual average.

(ii) Softening that results in removing at least 10 mg/L of magnesium hardness (as CaCO₃), measured monthly according to R309-200-4(3) and calculated quarterly as an annual running average.

(2) Enhanced coagulation and enhanced softening performance requirements.

(a) Systems shall achieve the percent reduction of TOC specified in paragraph (2)(b) of this section between the source water and the combined filter effluent, unless the Director approves a system's request for alternate minimum TOC removal (Step 2) requirements under paragraph (2)(c) of this section.

(b) Required Step 1 TOC reductions, indicated in the following table, are based upon specified source water parameters measured in accordance with R309-200-4(3). Systems practicing softening are required to meet the Step 1 TOC reductions in the far-right column (Source water alkalinity >120 mg/L) for the specified source water TOC:

TABLE 215-3

Step 1 Required Removal of TOC by Enhanced Coagulation and Enhanced Softening for Surface Water Systems Using Conventional Treatment (notes 1,2)

Source-Water TOC, mg/L	Source-Water Alkalinity, mg/L as CaCO ₃		
	0-60 (percent)	>60-120 (percent)	>120 (Note 3) (percent)
>2.0-4.0	35.0%	25.0%	15.0%
>4.0-8.0	45.0%	35.0%	25.0%
>8.0	50.0%	40.0%	30.0%

Note 1: Systems meeting at least one of the conditions in paragraph (1)(b)(i)-(vi) of this section are not required to operate with enhanced coagulation.

Note 2: Softening systems meeting one of the alternative compliance criteria in paragraph (1)(c) of this section are not required to operate with enhanced softening.

Note 3: Systems practicing softening shall meet the TOC removal requirements in this column.

(c) Surface water systems using conventional treatment systems that cannot achieve the Step 1 TOC removals required by paragraph (2)(b) of this section due to water quality parameters or operational constraints shall apply to the Director, within three months of failure to achieve the TOC removals required by paragraph (2)(b) of this section, for approval of alternative minimum TOC removal (Step 2) requirements submitted by the system. If the Director approves the alternative minimum TOC removal (Step 2) requirements, the Director may make those requirements retroactive for the purposes of determining compliance. Until the Director approves the alternate minimum TOC removal (Step 2) requirements, the system shall meet the Step 1 TOC removals contained in paragraph (2)(b) of this section.

(d) Alternate minimum TOC removal (Step 2) requirements. Applications made to the Director by enhanced coagulation systems for approval of alternate minimum TOC removal (Step 2) requirements under paragraph (2)(c) of this section shall include, at a minimum, results of bench- or pilot-scale testing conducted under paragraph (2)(d)(i) of this section. The submitted bench- or pilot- scale testing shall be used to determine the alternate enhanced coagulation level.

(i) Alternate enhanced coagulation level is defined as: Coagulation at a coagulant dose and pH as determined by the method described in paragraphs (2)(d)(i) through (v) of this section such that an incremental addition of 10 mg/L of alum (or equivalent amount of ferric salt) results in a TOC removal of less than or equal to 0.3 mg/L. The percent removal of TOC at this point on the "TOC removal versus coagulant dose" curve is then defined as the minimum TOC removal required for the system. Once approved by the Director, this minimum requirement supersedes the minimum TOC removal required by the table in paragraph (2)(b) of this section. This requirement will be effective until such time as the Director approves a new value based on the results of a new bench- and pilot-scale test. Failure to achieve Director set alternative minimum TOC removal levels is a violation of R309-215-13.

(ii) Bench- or pilot-scale testing of enhanced coagulation shall be conducted by using representative water samples and adding 10 mg/L increments of alum (or equivalent amounts of ferric salt) until the pH is reduced to a level less than or equal to the enhanced coagulation Step 2 target pH shown in the following table 215-4:

TABLE 215-4
ENHANCED COAGULATION STEP 2 TARGET pH

ALKALINITY (mg/L as CaCO ₃)	TARGET pH
0-60	5.5
>60-120	6.3
>120-240	7.0
>240	7.5

(iii) For waters with alkalinities of less than 60 mg/L for which addition of small amounts of alum or equivalent addition of iron coagulant drives the pH below 5.5 before significant TOC removal occurs, the system shall add necessary chemicals to maintain the pH between 5.3 and 5.7 in samples until the TOC removal of 0.3 mg/L per 10 mg/L alum added (or equivalent addition of iron coagulant) is reached.

(iv) The system may operate at any coagulant dose or pH necessary (consistent with other NPDWRs) to achieve the minimum TOC percent removal approved under paragraph (2)(c) of this section.

(v) If the TOC removal is consistently less than 0.3 mg/L of TOC per 10 mg/L of incremental alum dose at all dosages of alum (or equivalent addition of iron coagulant), the water is deemed to contain TOC not amenable to enhanced coagulation. The system may then apply to the Director for a waiver of enhanced coagulation requirements.

(3) Compliance Calculations.

(a) Surface Water Systems other than those identified in paragraphs (1)(b) or (1)(c) of this section shall comply with requirements contained in paragraphs (2)(b) or (2)(c) of this section. Systems shall calculate compliance quarterly, beginning after the system has collected 12 months of data, by determining an annual average using the following method:

(i) Determine actual monthly TOC percent removal, equal to: $(1 - (\text{treated water TOC}/\text{source water TOC})) \times 100$.

(ii) Determine the required monthly TOC percent removal (from either the table in paragraph (2)(b) of this section or from paragraph (2)(c) of this section).

(iii) Divide the value in paragraph (3)(a)(i) of this section by the value in paragraph (3)(a)(ii) of this section.

(iv) Add together the results of paragraph (3)(a)(iii) of this section for the last 12 months and divide by 12.

(v) If the value calculated in paragraph (3)(a)(iv) of this section is less than 1.00, the system is not in compliance with the TOC percent removal requirements.

(b) Systems may use the provisions in paragraphs (3)(b)(i) through (v) of this section in lieu of the calculations in paragraph (3)(a)(i) through (v) of this section to determine compliance with TOC percent removal requirements.

(i) In any month that the system's treated or source water TOC level, measured according to R309-200-4(3), is less than 2.0 mg/L, the system may assign a monthly value of 1.0 (in lieu of the value calculated in paragraph (3)(a)(iii) of this section) when calculating compliance under the provisions of paragraph (3)(a) of this section.

(ii) In any month that a system practicing softening removes at least 10 mg/L of magnesium hardness (as CaCO₃), the system may assign a monthly value of 1.0 (in lieu of the value calculated in paragraph (3)(a)(iii) of this section) when calculating compliance under the provisions of paragraph (3)(a) of this section.

(iii) In any month that the system's source water SUVA, prior to any treatment and measured according to R309-200-4(3), is less than or equal to 2.0 L/mg-m, the system may assign a monthly value of 1.0 (in lieu of the value calculated in paragraph (3)(a)(iii) of this section) when calculating compliance under the provisions of paragraph (3)(a) of this section.

(iv) In any month that the system's finished water SUVA, measured according to R309-200-4(3), is less than or equal to 2.0 L/mg-m, the system may assign a monthly value of 1.0 (in lieu of the value calculated in paragraph (3)(a)(iii) of this section) when calculating compliance under the provisions of paragraph (3)(a) of this section.

(v) In any month that a system practicing enhanced softening lowers alkalinity below 60 mg/L (as CaCO₃), the system may assign a monthly value of 1.0 (in lieu of the value calculated in paragraph (3)(a)(iii) of this section) when calculating compliance under the provisions of paragraph (3)(a) of this section.

(c) Surface Water Systems using conventional treatment may also comply with the requirements of this section by meeting the criteria in paragraph (1)(b) or (c) of this section.

(4) Treatment Technique Requirements for DBP Precursors. The Director identifies the following as treatment techniques to control the level of disinfection byproduct precursors in drinking water treatment and distribution systems: For Surface Water Systems using conventional treatment, enhanced coagulation or enhanced softening.

R309-215-14. Disinfection Profiling and Benchmarking.

A disinfection profile is a graphical representation of your system's level of *Giardia lamblia* or virus inactivation measured during the course of a year. Community or non-transient non-community water systems which use surface water or ground water under the direct influence of surface must develop a disinfection profile unless the Director determines that a system's profile is unnecessary. The Director may approve the use of a more representative data set for disinfection profiling than the data set required under R309-215-14.

(1) Determination of systems required to profile. A public water system subject to the requirements of this subpart shall determine its TTHM annual average using the procedure in paragraph (1)(a) of this section and its HAA5 annual average using the procedure in paragraph (1)(b) of this section. The annual average is the arithmetic average of the quarterly averages of four consecutive quarters of monitoring.

(a) The TTHM annual average shall be the annual average during the same period as is used for the HAA5 annual average.

(i) Those systems that collected data under the provisions of 40 CFR 141.142 subpart M (Information Collection Rule) shall use the results of the samples collected during the last four quarters of required monitoring.

(ii) Those systems that use grandfathered HAA5 occurrence data that meet the provisions of paragraph (1)(b)(ii) of this section shall use TTHM data collected at the same time under the provisions of R309-200-5(3)(c)(vii) and R309-210-9.

(iii) Those systems that use HAA5 occurrence data that meet the provisions of paragraph (1)(b)(iii)(A) of this section shall use TTHM data collected at the same time under the provisions of R309-200-5(3)(c)(vii) and R309-210-9.

(b) The HAA5 annual average shall be the annual average during the same period as is used for the TTHM annual average.

(i) Those systems that collected data under the provisions of 40 CFR 141.142 subpart M (Information Collection Rule) shall use the results of the samples collected during the last four quarters of required monitoring.

(ii) Those systems that have collected four quarters of HAA5 occurrence data that meets the routine monitoring sample number and location requirements for TTHM in R309-200-5(3)(c)(vii) and R309-210-9 and handling and analytical method requirements of R309-200-4(3) may use those data to determine whether the requirements of this section apply.

(iii) Those systems that have not collected four quarters of HAA5 occurrence data that meets the provisions of either paragraph (1)(b)(i) or (ii) of this section by March 16, 1999 shall either:

(A) Conduct monitoring for HAA5 that meets the routine monitoring sample number and location requirements for TTHM in R309-200-5(3)(c)(vii) and R309-210-9 and handling and analytical method requirements of R309-200-4(3) to determine the HAA5 annual average and whether the requirements of paragraph (2) of this section apply. This monitoring shall be completed so that the applicability determination can be made no later than March 31, 2000, or

(B) Comply with all other provisions of this section as if the HAA5 monitoring had been conducted and the results required compliance with paragraph (2) of this section.

(c) The system may request that the Director approve a more representative annual data set than the data set determined under paragraph (1)(a) or (b) of this section for the purpose of determining applicability of the requirements of this section.

(d) The Director may require that a system use a more representative annual data set than the data set determined under paragraph (1)(a) or (b) of this section for the purpose of determining applicability of the requirements of this section.

(e) The system shall submit data to the Director on the schedule in paragraphs (1)(e)(i) through (v) of this section.

(i) Those systems that collected TTHM and HAA5 data under the provisions of subpart M (Information Collection Rule), as required by paragraphs (1)(a)(i) and (1)(b)(i) of this section, shall submit the results of the samples collected during the last 12 months of required monitoring under 40 CFR section 141.142 (Information Collection Rule) not later than December 31, 1999.

(ii) Those systems that have collected four consecutive quarters of HAA5 occurrence data that meets the routine monitoring sample number and location for TTHM in R309-200-5(3)(c)(vii) and R309-210-9 and handling and analytical method requirements of R309-200-4(3), as allowed by paragraphs (1)(a)(ii) and (1)(b)(ii) of this section, shall submit those data to the Director not later April 16, 1999. Until the Director has approved the data, the system shall conduct monitoring for HAA5 using the monitoring requirements specified under paragraph (1)(b)(iii) of this section.

(iii) Those systems that conduct monitoring for HAA5 using the monitoring requirements specified by paragraphs (1)(a)(iii) and (1)(b)(iii)(A) of this section, shall submit TTHM

and HAA5 data not later than April 1, 2000.

(iv) Those systems that elect to comply with all other provisions of this section as if the HAA5 monitoring had been conducted and the results required compliance with this section, as allowed under paragraphs (1)(b)(iii)(B) of this section, shall notify the Director in writing of their election not later than December 31, 1999.

(v) If the system elects to request that the Director approve a more representative annual data set than the data set determined under paragraph (1)(b)(i) of this section, the system shall submit this request in writing not later than December 31, 1999.

(f) Any system having either a TTHM annual average greater than or equal to 0.064 mg/L or an HAA5 annual average greater than or equal to 0.048 mg/L during the period identified in paragraphs (1)(a) and (b) of this section shall comply with paragraph (2) of this section.

(g) The Director may only determine that a system's profile is unnecessary if a system's TTHM and HAA5 levels are below 0.064 mg/L and 0.048 mg/L, respectively. To determine these levels, TTHM and HAA5 samples must be collected after January 1, 1998, during the month with the warmest water temperature, and at the point of maximum residence time in your distribution system. The Director may approve a more representative TTHM and HAA5 data set to determine these levels.

(2) Disinfection profiling.

(a) Any system that is required by paragraph (1) of this section shall develop a disinfection profile of its disinfection practice for a period of up to three years. A disinfection profile consists of the following 3 steps:

(i) The system must collect data for several parameters from the plant over the course of 12 months. If your system serves between 500 and 9,999 persons you must begin to collect data no later than July 1, 2003. If your system serves fewer than 500 persons you must begin to collect data no later than January 1, 2004. If your system serves 10,000 persons or greater than the requirements of R309-215-14(2) are only required if it meets the criteria in paragraph R309-215-14(1)(f).

(ii) The system must use this data to calculate weekly log inactivation as discussed in paragraph (d) of this section.

(iii) The system must use these weekly log inactivations to develop a disinfection profile.

(b) The system shall monitor daily for a period of 12 consecutive calendar months to determine the total logs of inactivation for each day of operation, based on the CT99.9 values in Tables 1.1-1.6, 2.1, and 3.1 of Section 141.74(b)(3) in the code of Federal Regulations (also available from the Division), as appropriate, through the entire treatment plant. This system shall begin this monitoring not later than April 1, 2000. As a minimum, the system with a single point of disinfectant application prior to entrance to the distribution system shall conduct the monitoring in paragraphs (2)(b)(i) through (iv) of this section. A system with more than one point of disinfectant application shall conduct the monitoring in paragraphs (2)(b)(i) through (iv) of this section for each disinfection segment. The system shall monitor the parameters necessary to determine the total inactivation ratio, using analytical methods in R309-200-4(3), as follows:

(i) The temperature of the disinfected water shall be measured once per day at each residual disinfectant concentration sampling point during peak hourly flow.

(ii) If the system uses chlorine, the pH of the disinfected water shall be measured once per day at each chlorine residual disinfectant concentration sampling point during peak hourly flow.

(iii) The disinfectant contact time(s) ("T") shall be determined for each day during peak hourly flow.

(iv) The residual disinfectant concentration(s) ("C") of the

water before or at the first customer and prior to each additional point of disinfection shall be measured each day during peak hourly flow.

(v) For systems serving less than 10,000 persons, the above parameters shall be monitored once per week on the same calendar day, over 12 consecutive months for the purposes of disinfection profiling.

(c) In lieu of the monitoring conducted under the provisions of paragraph (2)(b) of this section to develop the disinfection profile, the system may elect to meet the requirements of paragraph (2)(c)(i) of this section. In addition to the monitoring conducted under the provisions of paragraph (2)(b) of this section to develop the disinfection profile, the system may elect to meet the requirements of paragraph (2)(c)(ii) of this section.

(i) A PWS that has three years of existing operational data may submit those data, a profile generated using those data, and a request that the Director approve use of those data in lieu of monitoring under the provisions of paragraph (2)(b) of this section not later than March 31, 2000. The Director shall determine whether these operational data are substantially equivalent to data collected under the provisions of paragraph (2)(b) of this section. These data shall also be representative of *Giardia lamblia* inactivation through the entire treatment plant and not just of certain treatment segments. Until the Director approves this request, the system is required to conduct monitoring under the provisions of paragraph (2)(b) of this section.

(ii) In addition to the disinfection profile generated under paragraph (2)(b) of this section, a PWS that has existing operational data may use those data to develop a disinfection profile for additional years. Such systems may use these additional yearly disinfection profiles to develop a benchmark under the provisions of paragraph (3) of this section. The Director shall determine whether these operational data are substantially equivalent to data collected under the provisions of paragraph (2)(b) of this section. These data shall also be representative of inactivation through the entire treatment plant and not just of certain treatment segments.

(d) The system shall calculate the total inactivation ratio as follows:

(i) If the system uses only one point of disinfectant application, the system may determine the total inactivation ratio for the disinfection segment based on either of the methods in paragraph (2)(d)(i)(A) or (2)(d)(i)(B) of this section.

(A) Determine one inactivation ratio ($CT_{calc}/CT_{99.9}$) before or at the first customer during peak hourly flow.

(B) Determine successive $CT_{calc}/CT_{99.9}$ values, representing sequential inactivation ratios, between the point of disinfectant application and a point before or at the first customer during peak hourly flow. Under this alternative, the system shall calculate the total inactivation ratio by determining ($CT_{calc}/CT_{99.9}$) for each sequence and then adding the ($CT_{calc}/CT_{99.9}$) values together to determine sum of ($CT_{calc}/CT_{99.9}$).

(ii) If the system uses more than one point of disinfectant application before the first customer, the system shall determine the CT value of each disinfection segment immediately prior to the next point of disinfectant application, or for the final segment, before or at the first customer, during peak hourly flow. The ($CT_{calc}/CT_{99.9}$) value of each segment and sum of ($CT_{calc}/CT_{99.9}$) shall be calculated using the method in paragraph (b)(4)(i) of this section.

(iii) The system shall determine the total logs of inactivation by multiplying the value calculated in paragraph (2)(d)(i) or (ii) of this section by 3.0.

(e) A system that uses either chloramines and chlorine dioxide or ozone for primary disinfection shall also calculate the logs of inactivation for viruses using a method approved by the

Director.

(f) The system shall retain disinfection profile data in graphic form, as a spreadsheet, or in some other format acceptable to the Director for review as part of sanitary surveys conducted by the Director.

(3) Disinfection Benchmarking

(a) Any system required to develop a disinfection profile under the provisions of paragraphs (1) and (2) of this section and that decides to make a significant change to its disinfection practice shall consult with the Director prior to making such change. Significant changes to disinfection practice are:

(i) Changes to the point of disinfection;

(ii) Changes to the disinfectant(s) used in the treatment plant;

(iii) Changes to the disinfection process; and

(iv) Any other modification identified by the Director.

(b) Any system that is modifying its disinfection practice shall calculate its disinfection benchmark using the procedure specified in paragraphs (3)(b)(i) through (ii) of this section.

(i) For each year of profiling data collected and calculated under paragraph (2) of this section, the system shall determine the lowest average monthly *Giardia lamblia* inactivation in each year of profiling data. The system shall determine the average *Giardia lamblia* inactivation for each calendar month for each year of profiling data by dividing the sum of daily *Giardia lamblia* of inactivation by the number of values calculated for that month.

(ii) The disinfection benchmark is the lowest monthly average value (for systems with one year of profiling data) or average of lowest monthly average values (for systems with more than one year of profiling data) of the monthly logs of *Giardia lamblia* inactivation in each year of profiling data.

(c) A system that uses either chloramines, ozone or chlorine dioxide for primary disinfection must calculate the disinfection benchmark from the data the system collected for viruses to develop the disinfection profile in addition to the *Giardia lamblia* disinfection benchmark calculated under paragraph (b)(i) above. This viral benchmark must be calculated in the same manner used to calculate the *Giardia lamblia* disinfection benchmark in paragraph (b)(i).

(d) The system shall submit information in paragraphs (3)(d)(i) through (iv) of this section to the Director as part of its consultation process.

(i) A description of the proposed change;

(ii) The disinfection profile for *Giardia lamblia* (and, if necessary, viruses) under paragraph (2) of this section and benchmark as required by paragraph (3)(b) of this section; and

(iii) An analysis of how the proposed change will affect the current levels of disinfection.

(iv) Any additional information requested by the Director.

R309-215-15. Enhanced Treatment for Cryptosporidium (Federal Subpart W).

(1) General requirements.

(a) The rule requirements of this section establish or extend treatment technique requirements in lieu of maximum contaminant levels for Cryptosporidium. These requirements are in addition to requirements for filtration and disinfection in R309-200 and other parts of R309-215.

(b) Applicability. The requirements of this subpart apply to all surface water systems, which are public water systems supplied by a surface water source and public water systems supplied by a ground water source under the direct influence of surface water.

(i) Wholesale systems, as defined in R309-110, must comply with the requirements of this section based on the population of the largest system in the combined distribution system.

(ii) The requirements of this sub-section apply to systems

required by these rules to provide filtration treatment, whether or not the system is currently operating a filtration system.

(c) Requirements. Systems subject to this subpart must comply with the following requirements:

(i) Systems must conduct an initial and a second round of source water monitoring for each plant that treats a surface water or GWUDI source. This monitoring may include sampling for Cryptosporidium, E. coli, and turbidity as described in R309-215-15(2) through R309-215-15(7), to determine what level, if any, of additional Cryptosporidium treatment they must provide.

(ii) Systems that plan to make a significant change to their disinfection practice must develop disinfection profiles and calculate disinfection benchmarks, as described in R309-215-15(9) through R309-215-15(10).

(iii) Filtered systems must determine their Cryptosporidium treatment bin classification as described in R309-215-15(11) and provide additional treatment for Cryptosporidium, if required, as described in R309-215-15(12). Filtered must implement Cryptosporidium treatment according to the schedule in R309-215-14.

(iv) Systems required to provide additional treatment for Cryptosporidium must implement microbial toolbox options that are designed and operated as described in R309-215-15(15) through R309-215-15(20).

(v) Systems must comply with the applicable recordkeeping and reporting requirements described in R309-215-15(21) through R309-215-15(22).

(vi) Systems must address significant deficiencies identified in sanitary surveys performed by EPA as described in R309-215-15(22).

(2) Source Water Monitoring Requirements.

(a) Initial round of source water monitoring. Systems must conduct the following monitoring on the schedule in paragraph (c) of this section unless they meet the monitoring exemption criteria in paragraph (d) of this section.

(i) Filtered systems serving at least 10,000 people must sample their source water for Cryptosporidium, E. coli, and turbidity at least monthly for 24 months.

(ii) (A) Filtered systems serving fewer than 10,000 people must sample their source water for E. coli at least once every two weeks for 12 months.

(B) A filtered system serving fewer than 10,000 people may avoid E. coli monitoring if the system notifies the Director that it will monitor for Cryptosporidium as described in paragraph (a)(iv) of this section. The system must notify the Director no later than 3 months prior to the date the system is otherwise required to start E. coli monitoring under R309-215-15(2)(c).

(iii) Filtered systems serving fewer than 10,000 people must sample their source water for Cryptosporidium at least twice per month for 12 months or at least monthly for 24 months if they meet one of the following, based on monitoring conducted under paragraph (a)(iii) of this section:

(A) For systems using lake/reservoir sources, the annual mean E. coli concentration is greater than 10 E. coli/ 100 mL.

(B) For systems using flowing stream sources, the annual mean E. coli concentration is greater than 50 E. coli/ 100 mL.

(C) The system does not conduct E. coli monitoring as described in paragraph (a)(iii) of this section.

(D) Systems using ground water under the direct influence of surface water (GWUDI) must comply with the requirements of paragraph (a)(iv) of this section based on the E. coli level that applies to the nearest surface water body. If no surface water body is nearby, the system must comply based on the requirements that apply to systems using lake/reservoir sources.

(iv) For filtered systems serving fewer than 10,000 people, the Director may approve monitoring for an indicator other than E. coli under paragraph (a)(ii) of this section. The Director also may approve an alternative to the E. coli concentration in

paragraph (a)(iii)(A), (B) or (D) of this section to trigger Cryptosporidium monitoring. This approval by the Director must be provided to the system in writing and must include the basis for the Director's determination that the alternative indicator and/or trigger level will provide a more accurate identification of whether a system will exceed the Bin 1 Cryptosporidium level in R309-215-15(11).

(v) Systems may sample more frequently than required under this section if the sampling frequency is evenly spaced throughout the monitoring period.

(b) Second round of source water monitoring. Systems must conduct a second round of source water monitoring that meets the requirements for monitoring parameters, frequency, and duration described in paragraph (a) of this section, unless they meet the monitoring exemption criteria in paragraph (d) of this section. Systems must conduct this monitoring on the schedule in paragraph (c) of this section.

(c) Monitoring schedule. Systems must begin the monitoring required in paragraphs (a) and (b) of this section no later than the month beginning with the date listed:

(i) Systems that serve at least 100,000 people must:

(A) begin the first round of source water monitoring no later than October 1, 2006; and

(B) begin the second round of source water monitoring no later than April 1, 2015.

(ii) Systems that serve from 50,000 to 99,999 people must:

(A) begin the first round of source water monitoring no later than April 1, 2007; and

(B) begin the second round of source water monitoring no later than October 1, 2015.

(iii) Systems that serve from 10,000 to 49,999 people must:

(A) begin the first round of source water monitoring no later than April 1, 2008; and

(B) begin the second round of source water monitoring no later than October 1, 2016.

(iv) Systems that serve less than 10,000 people and monitor for E. coli must:

(A) begin the first round of source water monitoring no later than October 1, 2008; and

(B) begin the second round of source water monitoring no later than October 1, 2017.

(C) Applies only to filtered systems.

(v) Systems that serve less than 10,000 people and monitor for Cryptosporidium must:

(A) begin the first round of source water monitoring no later than April 1, 2010; and

(B) begin the second round of source water monitoring no later than April 1, 2019.

(C) Applies to filtered systems that meet the conditions of paragraph (a)(iii) of this section.

(d) Monitoring avoidance.

(i) Filtered systems are not required to conduct source water monitoring under this sub-section if the system will provide a total of at least 5.5-log of treatment for Cryptosporidium, equivalent to meeting the treatment requirements of Bin 4 in R309-215-15(12).

(ii) If a system chooses to provide the level of treatment in paragraph (d)(i) of this section rather than start source monitoring, the system must notify the Director in writing no later than the date the system is otherwise required to submit a sampling schedule for monitoring under R309-215-15(3). Alternatively, a system may choose to stop sampling at any point after it has initiated monitoring if it notifies the Director in writing that it will provide this level of treatment. Systems must install and operate technologies to provide this level of treatment by the applicable compliance dates in R309-215-15(13).

(e) Plants operating only part of the year. Systems with

surface water plants that operate for only part of the year must conduct source water monitoring in accordance with this subpart, but with the following modifications:

(i) Systems must sample their source water only during the months that the plant operates unless the Director specifies another monitoring period based on plant operating practices.

(ii) Systems with plants that operate less than six months per year and that monitor for *Cryptosporidium* must collect at least six *Cryptosporidium* samples per year during each of two years of monitoring. Samples must be evenly spaced throughout the period the plant operates.

(f)(i) New sources. A system that begins using a new source of surface water or GWUDI after the system is required to begin monitoring under paragraph (c) of this section must monitor the new source on a schedule the Director approves. Source water monitoring must meet the requirements of this sub-section. The system must also meet the bin classification and *Cryptosporidium* treatment requirements of R309-215-15(11) and (12) for the new source on a schedule the Director approves.

(ii) The requirements of R309-215-15(2)(f) apply to surface water systems that begin operation after the monitoring start date applicable to the system's size under paragraph (c) of this section.

(iii) The system must begin a second round of source water monitoring no later than 6 years following initial bin classification under R309-215-15(11).

(g) Failure to collect any source water sample required under this section in accordance with the sampling schedule, sampling location, analytical method, approved laboratory, and reporting requirements of R309-215-15(3) through R309-215-15(7) is a monitoring violation.

(h) Grandfathering monitoring data. Systems may use (grandfather) monitoring data collected prior to the applicable monitoring start date in paragraph (c) of this section to meet the initial source water monitoring requirements in paragraph (a) of this section. Grandfathered data may substitute for an equivalent number of months at the end of the monitoring period. All data submitted under this paragraph must meet the requirements in R309-215-15(8).

(3) Sampling schedules.

(a) Systems required to conduct source water monitoring under R309-215-15(2) must submit a sampling schedule that specifies the calendar dates when the system will collect each required sample.

(i) Systems must submit sampling schedules no later than 3 months prior to the applicable date listed in R309-215-15(2)(c) for each round of required monitoring.

(ii) (A) Systems serving at least 10,000 people must submit their sampling schedule for the initial round of source water monitoring under R309-215-15(2)(a) to EPA electronically at <https://intranet.epa.gov/lt2/>.

(B) If a system is unable to submit the sampling schedule electronically, the system may use an alternative approach for submitting the sampling schedule that EPA approves.

(iii) Systems serving fewer than 10,000 people must submit their sampling schedules for the initial round of source water monitoring R309-215-15(2)(a) to the Director.

(iv) Systems must submit sampling schedules for the second round of source water monitoring R309-215-15(2)(b) to the Director.

(v) If EPA or the Director does not respond to a system regarding its sampling schedule, the system must sample at the reported schedule.

(b) Systems must collect samples within two days before or two days after the dates indicated in their sampling schedule (i.e., within a five-day period around the schedule date) unless one of the conditions of paragraph (b)(i) or (ii) of this section applies.

(i) If an extreme condition or situation exists that may pose danger to the sample collector, or that cannot be avoided and causes the system to be unable to sample in the scheduled five-day period, the system must sample as close to the scheduled date as is feasible unless the Director approves an alternative sampling date. The system must submit an explanation for the delayed sampling date to the Director concurrent with the shipment of the sample to the laboratory.

(ii)(A) If a system is unable to report a valid analytical result for a scheduled sampling date due to equipment failure, loss of or damage to the sample, failure to comply with the analytical method requirements, including the quality control requirements in R309-215-15(5), or the failure of an approved laboratory to analyze the sample, then the system must collect a replacement sample.

(B) The system must collect the replacement sample not later than 21 days after receiving information that an analytical result cannot be reported for the scheduled date unless the system demonstrates that collecting a replacement sample within this time frame is not feasible or the Director approves an alternative resampling date. The system must submit an explanation for the delayed sampling date to the Director concurrent with the shipment of the sample to the laboratory.

(c) Systems that fail to meet the criteria of paragraph (b) of this section for any source water sample required under R309-215-15(2) must revise their sampling schedules to add dates for collecting all missed samples. Systems must submit the revised schedule to the Director for approval prior to when the system begins collecting the missed samples.

(4) Sampling locations.

(a) Systems required to conduct source water monitoring under R309-215-15(2) must collect samples for each plant that treats a surface water or GWUDI source. Where multiple plants draw water from the same influent, such as the same pipe or intake, the Director may approve one set of monitoring results to be used to satisfy the requirements of R309-215-15(2) for all plants.

(b) (i) Systems must collect source water samples prior to chemical treatment, such as coagulants, oxidants and disinfectants, unless the system meets the condition of paragraph (b)(ii) of this section.

(ii) The Director may approve a system to collect a source water sample after chemical treatment. To grant this approval, the Director must determine that collecting a sample prior to chemical treatment is not feasible for the system and that the chemical treatment is unlikely to have a significant adverse effect on the analysis of the sample.

(c) Systems that recycle filter backwash water must collect source water samples prior to the point of filter backwash water addition.

(d) Bank filtration.

(i) Systems that receive *Cryptosporidium* treatment credit for bank filtration under R309-200-5(5)(a)(ii) must collect source water samples in the surface water prior to bank filtration.

(ii) Systems that use bank filtration as pretreatment to a filtration plant must collect source water samples from the well (i.e., after bank filtration). Use of bank filtration during monitoring must be consistent with routine operational practice. Systems collecting samples after a bank filtration process may not receive treatment credit for the bank filtration under R309-215-15(16)(c).

(e) Multiple sources. Systems with plants that use multiple water sources, including multiple surface water sources and blended surface water and ground water sources, must collect samples as specified in paragraph (e)(i) or (ii) of this section. The use of multiple sources during monitoring must be consistent with routine operational practice.

(i) If a sampling tap is available where the sources are

combined prior to treatment, systems must collect samples from the tap.

(ii) If a sampling tap where the sources are combined prior to treatment is not available, systems must collect samples at each source near the intake on the same day and must follow either paragraph (e)(ii)(A) or (B) of this section for sample analysis.

(A) Systems may composite samples from each source into one sample prior to analysis. The volume of sample from each source must be weighted according to the proportion of the source in the total plant flow at the time the sample is collected.

(B) Systems may analyze samples from each source separately and calculate a weighted average of the analysis results for each sampling date. The weighted average must be calculated by multiplying the analysis result for each source by the fraction the source contributed to total plant flow at the time the sample was collected and then summing these values.

(f) Additional Requirements. Systems must submit a description of their sampling location(s) to the Director at the same time as the sampling schedule required under R309-215-15(3). This description must address the position of the sampling location in relation to the system's water source(s) and treatment processes, including pretreatment, points of chemical treatment, and filter backwash recycle. If the Director does not respond to a system regarding sampling location(s), the system must sample at the reported location(s).

(5) Analytical methods.

(a) Cryptosporidium. Systems must analyze for Cryptosporidium using Method 1623: Cryptosporidium and Giardia in Water by Filtration/IMS/FA, 2005, United States Environmental Protection Agency, EPA-815-R-05-002 or Method 1622: Cryptosporidium in Water by Filtration/IMS/FA, 2005, United States Environmental Protection Agency, EPA-815-R-05-001, which are incorporated by reference. You may obtain a copy of these methods online from <http://www.epa.gov/safewater/disinfection/lt2> or from the United States Environmental Protection Agency, Office of Ground Water and Drinking Water, 1201 Constitution Ave., NW, Washington, DC 20460 (Telephone: 800-426-4791). You may inspect a copy at the Water Docket in the EPA Docket Center, 1301 Constitution Ave., NW, Washington, DC, (Telephone: 202-566-2426) or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. You may also obtain a copy of these methods by contacting the Division of Drinking Water at 801-536-4200.

(i) Systems must analyze at least a 10 L sample or a packed pellet volume of at least 2 mL as generated by the methods listed in paragraph (a) of this section. Systems unable to process a 10 L sample must analyze as much sample volume as can be filtered by two filters approved by EPA for the methods listed in paragraph (a) of this section, up to a packed pellet volume of at least 2 mL.

(ii) (A) Matrix spike (MS) samples, as required by the methods in paragraph (a) of this section, must be spiked and filtered by a laboratory approved for Cryptosporidium analysis under R309-215-15(6).

(B) If the volume of the MS sample is greater than 10 L, the system may filter all but 10 L of the MS sample in the field, and ship the filtered sample and the remaining 10 L of source water to the laboratory. In this case, the laboratory must spike the remaining 10 L of water and filter it through the filter used to collect the balance of the sample in the field.

(iii) Flow cytometer-counted spiking suspensions must be used for MS samples and ongoing precision and recovery (OPR) samples.

(b) E. coli. Systems must use methods for enumeration of

E. coli in source water approved in R309-200-4(3) and (4).

(i) The time from sample collection to initiation of analysis may not exceed 30 hours unless the system meets the condition of paragraph (b)(ii) of this section.

(ii) The Director may approve on a case-by-case basis the holding of an E. coli sample for up to 48 hours between sample collection and initiation of analysis if the Director determines that analyzing an E. coli sample within 30 hours is not feasible. E. coli samples held between 30 to 48 hours must be analyzed by the Colilert reagent version of Standard Method 9223B as listed in R309-200-4(3) and (4).

(iii) Systems must maintain samples between 0 deg. C and 10 deg. C during storage and transit to the laboratory.

(c) Turbidity. Systems must use methods for turbidity measurement approved in R309-200-4(3) and (4).

(6) Approved laboratories.

(a) Cryptosporidium. Systems must have Cryptosporidium samples analyzed by a laboratory that is approved under EPA's Laboratory Quality Assurance Evaluation Program for Analysis of Cryptosporidium in Water or a laboratory that has been certified for Cryptosporidium analysis by an equivalent State laboratory certification program.

(b) E. coli. Any laboratory certified by the EPA, the National Environmental Laboratory Accreditation Conference or the State for total coliform or fecal coliform analysis under R309-200-4(3) and (4) is approved for E. coli analysis under this subpart when the laboratory uses the same technique for E. coli that the laboratory uses for R309-200-4(3), (4) and in R444-14-4(1).

(c) Turbidity. Measurements of turbidity must be made by a party approved by the State.

(7) Reporting source water monitoring results.

(a) Systems must report results from the source water monitoring required under R309-215-15(2) no later than 10 days after the end of the first month following the month when the sample is collected.

(b) (i) All systems serving at least 10,000 people must report the results from the initial source water monitoring required under R309-215-15(2)(a) to EPA electronically at <https://intranet.epa.gov/lt2/>.

(ii) If a system is unable to report monitoring results electronically, the system may use an alternative approach for reporting monitoring results that EPA approves.

(c) Systems serving fewer than 10,000 people must report results from the initial source water monitoring required under R309-215-15(2)(a) to the Director.

(d) All systems must report results from the second round of source water monitoring required under R309-215-15(2)(b) to the Director.

(e) Systems must report the applicable information in paragraphs (e)(i) and (ii) of this section for the source water monitoring required under R309-215-15(2).

(i) Systems must report the following data elements for each Cryptosporidium analysis:

(A) PWS ID.

(B) Facility ID.

(C) Sample collection date.

(D) Sample type (field or matrix spike).

(E) Sample volume filtered (L), to nearest 1/4 L.

(F) Was 100% of filtered volume examined.

(G) Number of oocysts counted.

(H) For matrix spike samples, systems must also report the sample volume spiked and estimated number of oocysts spiked. These data are not required for field samples.

(I) For samples in which less than 10 L is filtered or less than 100% of the sample volume is examined, systems must also report the number of filters used and the packed pellet volume.

(J) For samples in which less than 100% of sample volume is examined, systems must also report the volume of

resuspended concentrate and volume of this resuspension processed through immunomagnetic separation.

(ii) Systems must report the following data elements for each *E. coli* analysis:

- (A) PWS ID.
- (B) Facility ID.
- (C) Sample collection date.
- (D) Analytical method number.
- (E) Method type.
- (F) Source type (flowing stream, lake/reservoir, GWUDI).
- (G) *E. coli*/100 mL.
- (H) Turbidity. (Systems serving fewer than 10,000 people that are not required to monitor for turbidity under R309-215-15(2) are not required to report turbidity with their *E. coli* results.)

(8) Grandfathering previously collected data.

(a) (i) Systems may comply with the initial source water monitoring requirements of R309-215-15(2)(a) by grandfathering sample results collected before the system is required to begin monitoring (i.e., previously collected data). To be grandfathered, the sample results and analysis must meet the criteria in this section and the Director must approve.

(ii) A filtered system may grandfather *Cryptosporidium* samples to meet the requirements of R309-215-15(2)(a) when the system does not have corresponding *E. coli* and turbidity samples. A system that grandfathers *Cryptosporidium* samples without *E. coli* and turbidity samples is not required to collect *E. coli* and turbidity samples when the system completes the requirements for *Cryptosporidium* monitoring under R309-215-15(2)(a).

(b) *E. coli* sample analysis. The analysis of *E. coli* samples must meet the analytical method and approved laboratory requirements of R309-215-15(5) through R309-215-15(6).

(c) *Cryptosporidium* sample analysis. The analysis of *Cryptosporidium* samples must meet the criteria in this paragraph.

(i) Laboratories analyzed *Cryptosporidium* samples using one of the analytical methods in paragraphs (c)(i)(A) through (D) of this section, which are incorporated by reference. You may obtain a copy of these methods on-line from the United States Environmental Protection Agency, Office of Ground Water and Drinking Water, 1201 Constitution Ave, NW, Washington, DC 20460 (Telephone: 800-426-4791). You may inspect a copy at the Water Docket in the EPA Docket Center, 1301 Constitution Ave., NW, Washington, DC, (Telephone: 202-566-2426) or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. You may also obtain a copy of these methods by contacting the Division of Drinking Water at 801-536-4200.

(A) Method 1623: *Cryptosporidium* and *Giardia* in Water by Filtration/IMS/ FA, 2005, United States Environmental Protection Agency, EPA-815-R-05-002.

(B) Method 1622: *Cryptosporidium* in Water by Filtration/IMS/FA, 2005, United States Environmental Protection Agency, EPA-815-R-05-001.

(C) Method 1623: *Cryptosporidium* and *Giardia* in Water by Filtration/IMS/ FA, 2001, United States Environmental Protection Agency, EPA-821-R-01-025.

(D) Method 1622: *Cryptosporidium* in Water by Filtration/IMS/FA, 2001, United States Environmental Protection Agency, EPA-821-R-01-026.

(E) Method 1623: *Cryptosporidium* and *Giardia* in Water by Filtration/IMS/ FA, 1999, United States Environmental Protection Agency, EPA-821-R-99-006.

(F) Method 1622: *Cryptosporidium* in Water by Filtration/IMS/FA, 1999, United States Environmental

Protection Agency, EPA-821-R-99-001.

(ii) For each *Cryptosporidium* sample, the laboratory analyzed at least 10 L of sample or at least 2 mL of packed pellet or as much volume as could be filtered by 2 filters that EPA approved for the methods listed in paragraph (c)(1) of this section.

(d) Sampling location. The sampling location must meet the conditions in R309-215-15(4).

(e) Sampling frequency. *Cryptosporidium* samples were collected no less frequently than each calendar month on a regular schedule, beginning no earlier than January 1999. Sample collection intervals may vary for the conditions specified in R309-215-15(3)(b)(i) and (ii) if the system provides documentation of the condition when reporting monitoring results.

(i) The Director may approve grandfathering of previously collected data where there are time gaps in the sampling frequency if the system conducts additional monitoring the Director specifies to ensure that the data used to comply with the initial source water monitoring requirements of R309-215-15(2)(a) are seasonally representative and unbiased.

(ii) Systems may grandfather previously collected data where the sampling frequency within each month varied. If the *Cryptosporidium* sampling frequency varied, systems must follow the monthly averaging procedure in R309-215-15(11)(b)(v) when calculating the bin classification for filtered systems.

(f) Reporting monitoring results for grandfathering. Systems that request to grandfather previously collected monitoring results must report the following information by the applicable dates listed in this paragraph. Systems serving at least 10,000 people must report this information to EPA unless the Director approves reporting to the Director rather than EPA. Systems serving fewer than 10,000 people must report this information to the Director.

(i) Systems must report that they intend to submit previously collected monitoring results for grandfathering. This report must specify the number of previously collected results the system will submit, the dates of the first and last sample, and whether a system will conduct additional source water monitoring to meet the requirements of R309-215-15(2)(a). Systems must report this information no later than the date the sampling schedule under R309-215-15(3) is required.

(ii) Systems must report previously collected monitoring results for grandfathering, along with the associated documentation listed in paragraphs (f)(ii)(A) through (D) of this section, no later than two months after the applicable date listed in R309-215-15(2)(c).

(A) For each sample result, systems must report the applicable data elements in R309-215-15(7).

(B) Systems must certify that the reported monitoring results include all results the system generated during the time period beginning with the first reported result and ending with the final reported result. This applies to samples that were collected from the sampling location specified for source water monitoring under this subpart, not spiked, and analyzed using the laboratory's routine process for the analytical methods listed in this section.

(C) Systems must certify that the samples were representative of a plant's source water(s) and the source water(s) have not changed. Systems must report a description of the sampling location(s), which must address the position of the sampling location in relation to the system's water source(s) and treatment processes, including points of chemical addition and filter backwash recycle.

(D) For *Cryptosporidium* samples, the laboratory or laboratories that analyzed the samples must provide a letter certifying that the quality control criteria specified in the methods listed in paragraph (c)(i) of this section were met for

each sample batch associated with the reported results. Alternatively, the laboratory may provide bench sheets and sample examination report forms for each field, matrix spike, IPR, OPR, and method blank sample associated with the reported results.

(g) If the Director determines that a previously collected data set submitted for grandfathering was generated during source water conditions that were not normal for the system, such as a drought, the Director may disapprove the data. Alternatively, the Director may approve the previously collected data if the system reports additional source water monitoring data, as determined by the Director, to ensure that the data set used under R309-215-15(11) represents average source water conditions for the system.

(h) If a system submits previously collected data that fully meet the number of samples required for initial source water monitoring under R309-215-15(2)(a) and some of the data are rejected due to not meeting the requirements of this section, systems must conduct additional monitoring to replace rejected data on a schedule the Director approves. Systems are not required to begin this additional monitoring until two months after notification that data have been rejected and additional monitoring is necessary.

(9) Disinfection Profiling and Benchmarking Requirements - Requirements when making a significant change in disinfection practice.

(a) Following the completion of initial source water monitoring under R309-215-15(2)(a), a system that plans to make a significant change to its disinfection practice, as defined in paragraph (b) of this section, must develop disinfection profiles and calculate disinfection benchmarks for *Giardia lamblia* and viruses as described in R309-215-15(10). Prior to changing the disinfection practice, the system must notify the Director and must include in this notice the information in paragraphs (a)(i) through (iii) of this section.

(i) A completed disinfection profile and disinfection benchmark for *Giardia lamblia* and viruses as described in R309-215-15(10).

(ii) A description of the proposed change in disinfection practice.

(iii) An analysis of how the proposed change will affect the current level of disinfection.

(b) Significant changes to disinfection practice are defined as follows:

(i) Changes to the point of disinfection;

(ii) Changes to the disinfectant(s) used in the treatment plant;

(iii) Changes to the disinfection process; or

(iv) Any other modification identified by the Director as a significant change to disinfection practice.

(10) Developing the disinfection profile and benchmark.

(a) Systems required to develop disinfection profiles under R309-215-15(9) must follow the requirements of this section. Systems must monitor at least weekly for a period of 12 consecutive months to determine the total log inactivation for *Giardia lamblia* and viruses. If systems monitor more frequently, the monitoring frequency must be evenly spaced. Systems that operate for fewer than 12 months per year must monitor weekly during the period of operation. Systems must determine log inactivation for *Giardia lamblia* through the entire plant, based on $CT_{99.9}$ values in Tables 1.1 through 1.6, 2.1 and 3.1 of Section 141.74(b) in the code of Federal Regulations as applicable (available from the Division). Systems must determine log inactivation for viruses through the entire treatment plant based on a protocol approved by the Director.

(b) Systems with a single point of disinfectant application prior to the entrance to the distribution system must conduct the monitoring in paragraphs (b)(i) through (iv) of this section. Systems with more than one point of disinfectant application

must conduct the monitoring in paragraphs (b)(i) through (iv) of this section for each disinfection segment. Systems must monitor the parameters necessary to determine the total inactivation ratio, using analytical methods in R309-200-4(3) and (4).

(i) For systems using a disinfectant other than UV, the temperature of the disinfected water must be measured at each residual disinfectant concentration sampling point during peak hourly flow or at an alternative location approved by the Director.

(ii) For systems using chlorine, the pH of the disinfected water must be measured at each chlorine residual disinfectant concentration sampling point during peak hourly flow or at an alternative location approved by the Director.

(iii) The disinfectant contact time(s) (t) must be determined during peak hourly flow.

(iv) The residual disinfectant concentration(s) (C) of the water before or at the first customer and prior to each additional point of disinfectant application must be measured during peak hourly flow.

(c) In lieu of conducting new monitoring under paragraph (b) of this section, systems may elect to meet the requirements of paragraphs (c)(i) or (ii) of this section.

(i) Systems that have at least one year of existing data that are substantially equivalent to data collected under the provisions of paragraph (b) of this section may use these data to develop disinfection profiles as specified in this section if the system has neither made a significant change to its treatment practice nor changed sources since the data were collected. Systems may develop disinfection profiles using up to three years of existing data.

(ii) Systems may use disinfection profile(s) developed under R309-215-14 in lieu of developing a new profile if the system has neither made a significant change to its treatment practice nor changed sources since the profile was developed. Systems that have not developed a virus profile under R309-251-14 must develop a virus profile using the same monitoring data on which the *Giardia lamblia* profile is based.

(d) Systems must calculate the total inactivation ratio for *Giardia lamblia* as specified in paragraphs (d)(i) through (iii) of this section.

(i) Systems using only one point of disinfectant application may determine the total inactivation ratio for the disinfection segment based on either of the methods in paragraph (d)(1)(i) or (ii) of this section.

(A) Determine one inactivation ratio ($CT_{calc}/CT_{99.9}$) before or at the first customer during peak hourly flow.

(B) Determine successive $CT_{calc}/CT_{99.9}$ values, representing sequential inactivation ratios, between the point of disinfectant application and a point before or at the first customer during peak hourly flow. The system must calculate the total inactivation ratio by determining ($CT_{calc}/CT_{99.9}$) for each sequence and then adding the ($CT_{calc}/CT_{99.9}$) values together to determine the sum of ($CT_{calc}/CT_{99.9}$).

(ii) Systems using more than one point of disinfectant application before the first customer must determine the CT value of each disinfection segment immediately prior to the next point of disinfectant application, or for the final segment, before or at the first customer, during peak hourly flow. The ($CT_{calc}/CT_{99.9}$) value of each segment and the sum of ($CT_{calc}/CT_{99.9}$) must be calculated using the method in paragraph (d)(i)(B) of this section.

(iii) The system must determine the total logs of inactivation by multiplying the value calculated in paragraph (d)(i) or (d)(ii) of this section by 3.0.

(iv) Systems must calculate the log of inactivation for viruses using a protocol approved by the Director.

(e) Systems must use the procedures specified in paragraphs (e)(i) and (ii) of this section to calculate a

disinfection benchmark.

(i) For each year of profiling data collected and calculated under paragraphs (a) through (d) of this section, systems must determine the lowest mean monthly level of both *Giardia lamblia* and virus inactivation. Systems must determine the mean *Giardia lamblia* and virus inactivation for each calendar month for each year of profiling data by dividing the sum of daily or weekly *Giardia lamblia* and virus log inactivation by the number of values calculated for that month.

(ii) The disinfection benchmark is the lowest monthly mean value (for systems with one year of profiling data) or the mean of the lowest monthly mean values (for systems with more than one year of profiling data) of *Giardia lamblia* and virus log inactivation in each year of profiling data.

(11) Treatment Technique Requirements - Bin classification for filtered systems.

(a) Following completion of the initial round of source water monitoring required under R309-215-15(2)(a), filtered systems must calculate an initial *Cryptosporidium* bin concentration for each plant for which monitoring was required. Calculation of the bin concentration must use the *Cryptosporidium* results reported under R309-215-15(2)(a) and must follow the procedures in paragraphs (b)(i) through (v) of this section.

(b)(i) For systems that collect a total of at least 48 samples, the bin concentration is equal to the arithmetic mean of all sample concentrations.

(ii) For systems that collect a total of at least 24 samples, but not more than 47 samples, the bin concentration is equal to the highest arithmetic mean of all sample concentrations in any 12 consecutive months during which *Cryptosporidium* samples were collected.

(iii) For systems that serve fewer than 10,000 people and monitor for *Cryptosporidium* for only one year (i.e., collect 24 samples in 12 months), the bin concentration is equal to the arithmetic mean of all sample concentrations.

(iv) For systems with plants operating only part of the year that monitor fewer than 12 months per year under R309-215-15(2)(e), the bin concentration is equal to the highest arithmetic mean of all sample concentrations during any year of *Cryptosporidium* monitoring.

(v) If the monthly *Cryptosporidium* sampling frequency varies, systems must first calculate a monthly average for each month of monitoring. Systems must then use these monthly average concentrations, rather than individual sample concentrations, in the applicable calculation for bin classification in paragraphs (b)(i) through (iv) of this section.

(c) Filtered systems must determine their initial bin classification from the following and using the *Cryptosporidium* bin concentration calculated under paragraphs (a) and (b) of this section:

(i) Systems that are required to monitor for *Cryptosporidium* under R309-215-15(2):

(A) with a *cryptosporidium* concentration of less than 0.075 oocyst/L, the bin classification is Bin 1.

(B) with a *cryptosporidium* concentration of 0.075 oocysts/L to less than 1.0 oocysts/L, the bin classification is Bin 2.

(C) with a *cryptosporidium* concentration of 1.0 oocysts/L to less than 3.0 oocysts/L, the bin classification is Bin 3.

(D) with a *cryptosporidium* concentration of equal to or greater than 3.0 oocysts/L, the bin classification is Bin 4.

(ii) Systems serving fewer than 10,000 people and not required to monitor for *Cryptosporidium* under R309-215-15(2)(a)(iii), the concentration of *cryptosporidium* is not applicable and their bin classification is Bin 1.

(iii) Based on calculations in paragraph (a) or (d) of this section, as applicable.

(d) Following completion of the second round of source

water monitoring required under R309-215-15(2)(b), filtered systems must recalculate their *Cryptosporidium* bin concentration using the *Cryptosporidium* results reported under R309-215-15(2)(b) and following the procedures in paragraphs (b)(i) through (iv) of this section. Systems must then redetermine their bin classification using this bin concentration and the table in paragraph (c) of this section.

(e)(i) Filtered systems must report their initial bin classification under paragraph (c) of this section to the Director for approval no later than 6 months after the system is required to complete initial source water monitoring based on the schedule in R309-215-15(2)(c).

(ii) Systems must report their bin classification under paragraph (d) of this section to the Director for approval no later than 6 months after the system is required to complete the second round of source water monitoring based on the schedule in R309-215-15(2)(c).

(iii) The bin classification report to the Director must include a summary of source water monitoring data and the calculation procedure used to determine bin classification.

(f) Failure to comply with the conditions of paragraph (e) of this section is a violation of the treatment technique requirements.

(12) Filtered system additional *Cryptosporidium* treatment requirements.

(a) Filtered systems must provide the level of additional treatment for *Cryptosporidium* specified in this paragraph based on their bin classification as determined under R309-215-15(11) and according to the schedule in R309-215-15(13). The filtration treatment used by the system in this paragraph must be utilized in full compliance with the requirements of R309-200-5(5), R309-200-7, R309-215-8 and 9.

(i) If the system bin classification is Bin 1 and the system uses:

(A) Conventional filtration treatment including softening there is no additional *cryptosporidium* treatment required.

(B) Direct filtration there is no additional *cryptosporidium* treatment required.

(C) Slow sand or diatomaceous earth filtration there is no additional *cryptosporidium* treatment required.

(D) Alternative filtration technologies there is no additional *cryptosporidium* treatment required.

(ii) If the system bin classification is Bin 2 and the system uses:

(A) Conventional filtration treatment including softening there is an additional 1-log *cryptosporidium* treatment required.

(B) Direct filtration there is an additional 1.5-log *cryptosporidium* treatment required.

(C) Slow sand or diatomaceous earth filtration there is an additional 1-log *cryptosporidium* treatment required.

(D) Alternative filtration technologies there is an additional *cryptosporidium* treatment required as determined by the Director such that the total *Cryptosporidium* removal an inactivation is at least 4.0-log.

(iii) If the system bin classification is Bin 3 and the system uses:

(A) Conventional filtration treatment including softening there is an additional 2-log *cryptosporidium* treatment required.

(B) Direct filtration there is an additional 2.5-log *cryptosporidium* treatment required.

(C) Slow sand or diatomaceous earth filtration there is an additional 2-log *cryptosporidium* treatment required.

(D) Alternative filtration technologies there is an additional *cryptosporidium* treatment required as determined by the Director such that the total *Cryptosporidium* removal an inactivation is at least 5.0-log.

(iv) If the system bin classification is Bin 4 and the system uses:

(A) Conventional filtration treatment including softening

there is an additional 2.5-log cryptosporidium treatment required.

(B) Direct filtration there is an additional 3-log cryptosporidium treatment required.

(C) Slow sand or diatomaceous earth filtration there is an additional 2.5-log cryptosporidium treatment required.

(D) Alternative filtration technologies there is an additional cryptosporidium treatment required as determined by the Director such that the total Cryptosporidium removal an inactivation is at least 5.5-log.

(b)(i) Filtered systems must use one or more of the treatment and management options listed in R309-215-15(14), termed the microbial toolbox, to comply with the additional Cryptosporidium treatment required in paragraph (a) of this section.

(ii) Systems classified in Bin 3 and Bin 4 must achieve at least 1-log of the additional Cryptosporidium treatment required under paragraph (a) of this section using either one or a combination of the following: bag filters, bank filtration, cartridge filters, chlorine dioxide, membranes, ozone, or UV, as described in R309-215-15(15) through R309-215-15(19).

(c) Failure by a system in any month to achieve treatment credit by meeting criteria in R309-215-15(15) through R309-215-15(19) for microbial toolbox options that is at least equal to the level of treatment required in paragraph (a) of this section is a violation of the treatment technique requirement.

(d) If the Director determines during a sanitary survey or an equivalent source water assessment that after a system completed the monitoring conducted under R309-215-15(2)(a) or R309-215-15(2)(b), significant changes occurred in the system's watershed that could lead to increased contamination of the source water by Cryptosporidium, the system must take actions specified by the Director to address the contamination. These actions may include additional source water monitoring and/or implementing microbial toolbox options listed in R309-215-15(14).

(13) Schedule for compliance with Cryptosporidium treatment requirements.

(a) Following initial bin classification under R309-215-15(11)(c), filtered systems must provide the level of treatment for Cryptosporidium required under R309-215-15(12) according to the schedule in paragraph (c) of this section.

(b) Cryptosporidium treatment compliance dates.

(i) Systems that serve at least 100,000 people must comply with Cryptosporidium treatment requirements no later than April 1, 2012.

(ii) Systems that serve from 50,000 to 99,999 people must comply with Cryptosporidium treatment requirements no later than October 1, 2012.

(iii) Systems that serve from 10,000 to 49,999 people must comply with Cryptosporidium treatment requirements no later than October 1, 2013.

(iv) Systems that serve less than 10,000 people must comply with Cryptosporidium treatment requirements no later than October 1, 2014.

(v) The Director may allow up to an additional two years for complying with the treatment requirement for systems making capital improvements.

(c) If the bin classification for a filtered system changes following the second round of source water monitoring, as determined under R309-215-15(11)(d), the system must provide the level of treatment for Cryptosporidium required under R309-215-15(12) on a schedule the Director approves.

(14) Microbial toolbox options for meeting Cryptosporidium treatment requirements.

(a) Systems receive the treatment credits listed in the table in paragraph (b) of this section by meeting the conditions for microbial toolbox options described in R309-215-15(15) through R309-215-15(19). Systems apply these treatment

credits to meet the treatment requirements in R309-215-15(12).

(b) The following sub-section summarizes options in the microbial toolbox and the Cryptosporidium treatment credit with design and implementation criteria.

(i) Source Protection and Management Toolbox Options:

(A) Watershed control program: 0.5-log credit for Director-approved program comprising required elements, annual program status report to Director, and regular watershed survey. Specific criteria are in R309-215-15(15) (a).

(B) Alternative source/intake management: No prescribed credit. Systems may conduct simultaneous monitoring for treatment bin classification at alternative intake locations or under alternative intake management strategies. Specific criteria are in R309-215-15(15) (b).

(ii) Pre Filtration Toolbox Options:

(A) Presedimentation basin with coagulation: 0.5-log credit during any month that presedimentation basins achieve a monthly mean reduction of 0.5-log or greater in turbidity or alternative Director-approved performance criteria. To be eligible, basins must be operated continuously with coagulant addition and all plant flow must pass through basins. Specific criteria are in R309-215-15(16) (a).

(B) Two-stage lime softening: 0.5-log credit for two-stage softening where chemical addition and hardness precipitation occur in both stages. All plant flow must pass through both stages. Single-stage softening is credited as equivalent to conventional treatment. Specific criteria are in R309-215-15(16) (b).

(C) Bank filtration: 0.5-log credit for 25-foot setback; 1.0-log credit for 50-foot setback; aquifer must be unconsolidated sand containing at least 10 percent fines; average turbidity in wells must be less than 1 NTU. Systems using wells followed by filtration when conducting source water monitoring must sample the well to determine bin classification and are not eligible for additional credit. Specific criteria are in R309-215-15(16) (c).

(iii) Treatment Performance Toolbox Options:

(A) Combined filter performance: 0.5-log credit for combined filter effluent turbidity less than or equal to 0.15 NTU in at least 95 percent of measurements each month. Specific criteria are in R309-215-15(17) (a).

(B) Individual filter performance: 0.5-log credit (in addition to 0.5-log combined filter performance credit) if individual filter effluent turbidity is less than or equal to 0.15 NTU in at least 95 percent of samples each month in each filter and is never greater than 0.3 NTU in two consecutive measurements in any filter. Specific criteria are in R309-215-15(17) (b).

(C) Demonstration of performance: Credit awarded to unit process or treatment train based on a demonstration to the Director with a Director-approved protocol. Specific criteria are in R309-215-15(17) (c).

(iv) Additional Filtration Toolbox Options:

(A) Bag or cartridge filters (individual filters): Up to 2-log credit based on the removal efficiency demonstrated during challenge testing with a 1.0-log factor of safety. Specific criteria are in R309-215-15(18) (a).

(B) Bag or cartridge filters (in series): Up to 2.5-log credit based on the removal efficiency demonstrated during challenge testing with a 0.5-log factor of safety. Specific criteria are in R309-215-15(18) (a).

(C) Membrane filtration: Log credit equivalent to removal efficiency demonstrated in challenge test for device if supported by direct integrity testing. Specific criteria are in R309-215-15(18) (b).

(D) Second stage filtration: 0.5-log credit for second separate granular media filtration stage if treatment train includes coagulation prior to first filter. Specific criteria are in R309-215-15(18) (c).

(E) Slow sand filters: 2.5-log credit as a secondary filtration step; 3.0-log credit as a primary filtration process. No prior chlorination for either option. Specific criteria are in R309-215-15(18) (d).

(v) Inactivation Toolbox Options:

(A) Chlorine dioxide: Log credit based on measured CT in relation to CT table. Specific criteria in R309-215-15(19) (b).

(B) Ozone: Log credit based on measured CT in relation to CT table. Specific criteria in R309-215-15(19) (b).

(C) UV: Log credit based on validated UV dose in relation to UV dose table; reactor validation testing required to establish UV dose and associated operating conditions. Specific criteria in R309-215-15(19) (d).

(15) Source toolbox components.

(a) Watershed control program. Systems receive 0.5-log Cryptosporidium treatment credit for implementing a watershed control program that meets the requirements of this section.

(i) Systems that intend to apply for the watershed control program credit must notify the Director of this intent no later than two years prior to the treatment compliance date applicable to the system in R309-215-15(13).

(ii) Systems must submit to the Director a proposed watershed control plan no later than one year before the applicable treatment compliance date in R309-215-15(13). The Director must approve the watershed control plan for the system to receive watershed control program treatment credit. The watershed control plan must include the elements in paragraphs (a)(ii)(A) through (D) of this section.

(A) Identification of an "area of influence" outside of which the likelihood of Cryptosporidium or fecal contamination affecting the treatment plant intake is not significant. This is the area to be evaluated in future watershed surveys under paragraph (a)(v)(B) of this section.

(B) Identification of both potential and actual sources of Cryptosporidium contamination and an assessment of the relative impact of these sources on the system's source water quality.

(C) An analysis of the effectiveness and feasibility of control measures that could reduce Cryptosporidium loading from sources of contamination to the system's source water.

(D) A statement of goals and specific actions the system will undertake to reduce source water Cryptosporidium levels. The plan must explain how the actions are expected to contribute to specific goals, identify watershed partners and their roles, identify resource requirements and commitments, and include a schedule for plan implementation with deadlines for completing specific actions identified in the plan.

(iii) Systems with existing watershed control programs (i.e., programs in place on January 5, 2006) are eligible to seek this credit. Their watershed control plans must meet the criteria in paragraph (a)(ii) of this section and must specify ongoing and future actions that will reduce source water Cryptosporidium levels.

(iv) If the Director does not respond to a system regarding approval of a watershed control plan submitted under this section and the system meets the other requirements of this section, the watershed control program will be considered approved and 0.5 log Cryptosporidium treatment credit will be awarded unless and until the Director subsequently withdraws such approval.

(v) Systems must complete the actions in paragraphs (a)(v)(A) through (C) of this section to maintain the 0.5-log credit.

(A) Submit an annual watershed control program status report to the Director. The annual watershed control program status report must describe the system's implementation of the approved plan and assess the adequacy of the plan to meet its goals. It must explain how the system is addressing any

shortcomings in plan implementation, including those previously identified by the Director or as the result of the watershed survey conducted under paragraph (a)(v)(B) of this section. It must also describe any significant changes that have occurred in the watershed since the last watershed sanitary survey. If a system determines during implementation that making a significant change to its approved watershed control program is necessary, the system must notify the Director prior to making any such changes. If any change is likely to reduce the level of source water protection, the system must also list in its notification the actions the system will take to mitigate this effect.

(B) Undergo a watershed sanitary survey every three years for community water systems and every five years for non-community water systems and submit the survey report to the Director. The survey must be conducted according to State guidelines and by persons the Director approves.

(i) The watershed sanitary survey must meet the following criteria: encompass the region identified in the Director-approved watershed control plan as the area of influence; assess the implementation of actions to reduce source water Cryptosporidium levels; and identify any significant new sources of Cryptosporidium.

(ii) If the Director determines that significant changes may have occurred in the watershed since the previous watershed sanitary survey, systems must undergo another watershed sanitary survey by a date the Director requires, which may be earlier than the regular date in paragraph (a)(v)(B) of this section.

(C) The system must make the watershed control plan, annual status reports, and watershed sanitary survey reports available to the public upon request. These documents must be in a plain language style and include criteria by which to evaluate the success of the program in achieving plan goals. The Director may approve systems to withhold from the public portions of the annual status report, watershed control plan, and watershed sanitary survey based on water supply security considerations.

(vi) If the Director determines that a system is not carrying out the approved watershed control plan, the Director may withdraw the watershed control program treatment credit.

(b) Alternative source. (i) A system may conduct source water monitoring that reflects a different intake location (either in the same source or for an alternate source) or a different procedure for the timing or level of withdrawal from the source (alternative source monitoring). If the Director approves, a system may determine its bin classification under R309-215-15(11) based on the alternative source monitoring results.

(ii) If systems conduct alternative source monitoring under paragraph (b)(i) of this section, systems must also monitor their current plant intake concurrently as described in R309-215-15(2).

(iii) Alternative source monitoring under paragraph (b)(i) of this section must meet the requirements for source monitoring to determine bin classification, as described in R309-215-15(2) through R309-215-15(7). Systems must report the alternative source monitoring results to the Director, along with supporting information documenting the operating conditions under which the samples were collected.

(iv) If a system determines its bin classification under R309-215-15(11) using alternative source monitoring results that reflect a different intake location or a different procedure for managing the timing or level of withdrawal from the source, the system must relocate the intake or permanently adopt the withdrawal procedure, as applicable, no later than the applicable treatment compliance date in R309-215-15(13).

(16) Pre-filtration treatment toolbox components.

(a) Presedimentation. Systems receive 0.5-log Cryptosporidium treatment credit for a presedimentation basin

during any month the process meets the criteria in this paragraph.

(i) The presedimentation basin must be in continuous operation and must treat the entire plant flow taken from a surface water or GWUDI source.

(ii) The system must continuously add a coagulant to the presedimentation basin.

(iii) The presedimentation basin must achieve the performance criteria in paragraph (iii)(A) or (B) of this section.

(A) Demonstrates at least 0.5-log mean reduction of influent turbidity. This reduction must be determined using daily turbidity measurements in the presedimentation process influent and effluent and must be calculated as follows: $\log_{10}(\text{monthly mean of daily influent turbidity}) - \log_{10}(\text{monthly mean of daily effluent turbidity})$.

(B) Complies with Director-approved performance criteria that demonstrate at least 0.5-log mean removal of micron-sized particulate material through the presedimentation process.

(b) Two-stage lime softening. Systems receive an additional 0.5-log Cryptosporidium treatment credit for a two-stage lime softening plant if chemical addition and hardness precipitation occur in two separate and sequential softening stages prior to filtration. Both softening stages must treat the entire plant flow taken from a surface water or GWUDI source.

(c) Bank filtration. Systems receive Cryptosporidium treatment credit for bank filtration that serves as pretreatment to a filtration plant by meeting the criteria in this paragraph. Systems using bank filtration when they begin source water monitoring under R309-215-15(2)(a) must collect samples as described in R309-215-15(4)(d) and are not eligible for this credit.

(i) Wells with a ground water flow path of at least 25 feet receive 0.5-log treatment credit; wells with a ground water flow path of at least 50 feet receive 1.0-log treatment credit. The ground water flow path must be determined as specified in paragraph (c)(iv) of this section.

(ii) Only wells in granular aquifers are eligible for treatment credit. Granular aquifers are those comprised of sand, clay, silt, rock fragments, pebbles or larger particles, and minor cement. A system must characterize the aquifer at the well site to determine aquifer properties. Systems must extract a core from the aquifer and demonstrate that in at least 90 percent of the core length, grains less than 1.0 mm in diameter constitute at least 10 percent of the core material.

(iii) Only horizontal and vertical wells are eligible for treatment credit.

(iv) For vertical wells, the ground water flow path is the measured distance from the edge of the surface water body under high flow conditions (determined by the 100 year floodplain elevation boundary or by the floodway, as defined in Federal Emergency Management Agency flood hazard maps) to the well screen. For horizontal wells, the ground water flow path is the measured distance from the bed of the river under normal flow conditions to the closest horizontal well lateral screen.

(v) Systems must monitor each wellhead for turbidity at least once every four hours while the bank filtration process is in operation. If monthly average turbidity levels, based on daily maximum values in the well, exceed 1 NTU, the system must report this result to the Director and conduct an assessment within 30 days to determine the cause of the high turbidity levels in the well. If the Director determines that microbial removal has been compromised, the Director may revoke treatment credit until the system implements corrective actions approved by the Director to remediate the problem.

(vi) Springs and infiltration galleries are not eligible for treatment credit under this section, but are eligible for credit under R309-215-15(17)(c).

(vii) Bank filtration demonstration of performance. The

Director may approve Cryptosporidium treatment credit for bank filtration based on a demonstration of performance study that meets the criteria in this paragraph. This treatment credit may be greater than 1.0-log and may be awarded to bank filtration that does not meet the criteria in paragraphs (c)(i)-(v) of this section.

(A) The study must follow a Director-approved protocol and must involve the collection of data on the removal of Cryptosporidium or a surrogate for Cryptosporidium and related hydrogeologic and water quality parameters during the full range of operating conditions.

(B) The study must include sampling both from the production well(s) and from monitoring wells that are screened and located along the shortest flow path between the surface water source and the production well(s).

(17) Treatment performance toolbox components.

(a) Combined filter performance. Systems using conventional filtration treatment or direct filtration treatment receive an additional 0.5-log Cryptosporidium treatment credit during any month the system meets the criteria in this paragraph. Combined filter effluent (CFE) turbidity must be less than or equal to 0.15 NTU in at least 95 percent of the measurements. Turbidity must be measured as described in R309-200-4(3) and (4).

(b) Individual filter performance. Systems using conventional filtration treatment or direct filtration treatment receive 0.5-log Cryptosporidium treatment credit, which can be in addition to the 0.5-log credit under paragraph (a) of this section, during any month the system meets the criteria in this paragraph. Compliance with these criteria must be based on individual filter turbidity monitoring as described in R309-215-9(4) or (5), as applicable.

(i) The filtered water turbidity for each individual filter must be less than or equal to 0.15 NTU in at least 95 percent of the measurements recorded each month.

(ii) No individual filter may have a measured turbidity greater than 0.3 NTU in two consecutive measurements taken 15 minutes apart.

(iii) Any system that has received treatment credit for individual filter performance and fails to meet the requirements of paragraph (b)(i) or (ii) of this section during any month does not receive a treatment technique violation under R309-215-15(12)(c) if the Director determines the following:

(A) The failure was due to unusual and short-term circumstances that could not reasonably be prevented through optimizing treatment plant design, operation, and maintenance.

(B) The system has experienced no more than two such failures in any calendar year.

(c) Demonstration of performance. The Director may approve Cryptosporidium treatment credit for drinking water treatment processes based on a demonstration of performance study that meets the criteria in this paragraph. This treatment credit may be greater than or less than the prescribed treatment credits in R309-215-15(12) or R309-215-15(16) through R309-215-15(19) and may be awarded to treatment processes that do not meet the criteria for the prescribed credits.

(i) Systems cannot receive the prescribed treatment credit for any toolbox box option in R309-215-15(16) through R309-215-15(19) if that toolbox option is included in a demonstration of performance study for which treatment credit is awarded under this paragraph.

(ii) The demonstration of performance study must follow a Director-approved protocol and must demonstrate the level of Cryptosporidium reduction the treatment process will achieve under the full range of expected operating conditions for the system.

(iii) Approval by the Director must be in writing and may include monitoring and treatment performance criteria that the system must demonstrate and report on an ongoing basis to

remain eligible for the treatment credit. The Director may designate such criteria where necessary to verify that the conditions under which the demonstration of performance credit was approved are maintained during routine operation.

(18) Additional filtration toolbox components.

(a) Bag and cartridge filters. Systems receive Cryptosporidium treatment credit of up to 2.0-log for individual bag or cartridge filters and up to 2.5-log for bag or cartridge filters operated in series by meeting the criteria in paragraphs (a)(i) through (x) of this section. To be eligible for this credit, systems must report the results of challenge testing that meets the requirements of paragraphs (a)(ii) through (ix) of this section to the Director. The filters must treat the entire plant flow taken from a surface water source.

(i) The Cryptosporidium treatment credit awarded to bag or cartridge filters must be based on the removal efficiency demonstrated during challenge testing that is conducted according to the criteria in paragraphs (a)(ii) through (a)(ix) of this section. A factor of safety equal to 1-log for individual bag or cartridge filters and 0.5-log for bag or cartridge filters in series must be applied to challenge testing results to determine removal credit. Systems may use results from challenge testing conducted prior to January 5, 2006 if the prior testing was consistent with the criteria specified in paragraphs (a)(ii) through (ix) of this section.

(ii) Challenge testing must be performed on full-scale bag or cartridge filters, and the associated filter housing or pressure vessel, that are identical in material and construction to the filters and housings the system will use for removal of Cryptosporidium. Bag or cartridge filters must be challenge tested in the same configuration that the system will use, either as individual filters or as a series configuration of filters.

(iii) Challenge testing must be conducted using Cryptosporidium or a surrogate that is removed no more efficiently than Cryptosporidium. The microorganism or surrogate used during challenge testing is referred to as the challenge particulate. The concentration of the challenge particulate must be determined using a method capable of discretely quantifying the specific microorganism or surrogate used in the test; gross measurements such as turbidity may not be used.

(iv) The maximum feed water concentration that can be used during a challenge test must be based on the detection limit of the challenge particulate in the filtrate (i.e., filtrate detection limit) and must be calculated using the following equation: Maximum Feed Concentration = $1 \times 10^4 \times$ (Filtrate Detection Limit).

(v) Challenge testing must be conducted at the maximum design flow rate for the filter as specified by the manufacturer.

(vi) Each filter evaluated must be tested for a duration sufficient to reach 100 percent of the terminal pressure drop, which establishes the maximum pressure drop under which the filter may be used to comply with the requirements of this subpart.

(vii) Removal efficiency of a filter must be determined from the results of the challenge test and expressed in terms of log removal values using the following equation: $LRV = \text{LOG}_{10}(C_f) - \text{LOG}_{10}(C_p)$ Where: LRV = log removal value demonstrated during challenge testing; C_f = the feed concentration measured during the challenge test; and C_p = the filtrate concentration measured during the challenge test. In applying this equation, the same units must be used for the feed and filtrate concentrations. If the challenge particulate is not detected in the filtrate, then the term C_p must be set equal to the detection limit.

(viii) Each filter tested must be challenged with the challenge particulate during three periods over the filtration cycle: within two hours of start-up of a new filter; when the pressure drop is between 45 and 55 percent of the terminal

pressure drop; and at the end of the cycle after the pressure drop has reached 100 percent of the terminal pressure drop. An LRV must be calculated for each of these challenge periods for each filter tested. The LRV for the filter (LRV_{filter}) must be assigned the value of the minimum LRV observed during the three challenge periods for that filter.

(ix) If fewer than 20 filters are tested, the overall removal efficiency for the filter product line must be set equal to the lowest LRV_{filter} among the filters tested. If 20 or more filters are tested, the overall removal efficiency for the filter product line must be set equal to the 10th percentile of the set of LRV_{filter} values for the various filters tested. The percentile is defined by $(i/(n+1))$ where i is the rank of n individual data points ordered lowest to highest. If necessary, the 10th percentile may be calculated using linear interpolation.

(x) If a previously tested filter is modified in a manner that could change the removal efficiency of the filter product line, challenge testing to demonstrate the removal efficiency of the modified filter must be conducted and submitted to the Director.

(b) Membrane filtration.

(i) Systems receive Cryptosporidium treatment credit for membrane filtration that meets the criteria of this paragraph. Membrane cartridge filters that meet the definition of membrane filtration in R309-110 are eligible for this credit. The level of treatment credit a system receives is equal to the lower of the values determined under paragraph (b)(i)(A) and (B) of this section.

(A) The removal efficiency demonstrated during challenge testing conducted under the conditions in paragraph (b)(ii) of this section.

(B) The maximum removal efficiency that can be verified through direct integrity testing used with the membrane filtration process under the conditions in paragraph (b)(iii) of this section.

(ii) Challenge Testing. The membrane used by the system must undergo challenge testing to evaluate removal efficiency, and the system must report the results of challenge testing to the Director. Challenge testing must be conducted according to the criteria in paragraphs (b)(ii)(A) through (G) of this section. Systems may use data from challenge testing conducted prior to January 5, 2006 if the prior testing was consistent with the criteria in paragraphs (b)(ii)(A) through (G) of this section.

(A) Challenge testing must be conducted on either a full-scale membrane module, identical in material and construction to the membrane modules used in the system's treatment facility, or a smaller-scale membrane module, identical in material and similar in construction to the full-scale module. A module is defined as the smallest component of a membrane unit in which a specific membrane surface area is housed in a device with a filtrate outlet structure.

(B) Challenge testing must be conducted using Cryptosporidium oocysts or a surrogate that is removed no more efficiently than Cryptosporidium oocysts. The organism or surrogate used during challenge testing is referred to as the challenge particulate. The concentration of the challenge particulate, in both the feed and filtrate water, must be determined using a method capable of discretely quantifying the specific challenge particulate used in the test; gross measurements such as turbidity may not be used.

(C) The maximum feed water concentration that can be used during a challenge test is based on the detection limit of the challenge particulate in the filtrate and must be determined according to the following equation: Maximum Feed Concentration = $3.16 \times 10^6 \times$ (Filtrate Detection Limit).

(D) Challenge testing must be conducted under representative hydraulic conditions at the maximum design flux and maximum design process recovery specified by the manufacturer for the membrane module. Flux is defined as the throughput of a pressure driven membrane process expressed as

flow per unit of membrane area. Recovery is defined as the volumetric percent of feed water that is converted to filtrate over the course of an operating cycle uninterrupted by events such as chemical cleaning or a solids removal process (i.e., backwashing).

(E) Removal efficiency of a membrane module must be calculated from the challenge test results and expressed as a log removal value according to the following equation: $LRV = \text{LOG}_{10}(C_f) - \text{LOG}_{10}(C_p)$ Where: LRV = log removal value demonstrated during the challenge test; C_f = the feed concentration measured during the challenge test; and C_p = the filtrate concentration measured during the challenge test. Equivalent units must be used for the feed and filtrate concentrations. If the challenge particulate is not detected in the filtrate, the term C_p is set equal to the detection limit for the purpose of calculating the LRV. An LRV must be calculated for each membrane module evaluated during the challenge test.

(F) The removal efficiency of a membrane filtration process demonstrated during challenge testing must be expressed as a log removal value (LRV_{C-Test}). If fewer than 20 modules are tested, then LRV_{C-Test} is equal to the lowest of the representative LRVs among the modules tested. If 20 or more modules are tested, then LRV_{C-Test} is equal to the 10th percentile of the representative LRVs among the modules tested. The percentile is defined by $(i/(n+1))$ where i is the rank of n individual data points ordered lowest to highest. If necessary, the 10th percentile may be calculated using linear interpolation.

(G) The challenge test must establish a quality control release value (QCRV) for a non-destructive performance test that demonstrates the Cryptosporidium removal capability of the membrane filtration module. This performance test must be applied to each production membrane module used by the system that was not directly challenge tested in order to verify Cryptosporidium removal capability. Production modules that do not meet the established QCRV are not eligible for the treatment credit demonstrated during the challenge test.

(H) If a previously tested membrane is modified in a manner that could change the removal efficiency of the membrane or the applicability of the non-destructive performance test and associated QCRV, additional challenge testing to demonstrate the removal efficiency of, and determine a new QCRV for, the modified membrane must be conducted and submitted to the Director.

(iii) Direct integrity testing. Systems must conduct direct integrity testing in a manner that demonstrates a removal efficiency equal to or greater than the removal credit awarded to the membrane filtration process and meets the requirements described in paragraphs (b)(iii)(A) through (F) of this section. A direct integrity test is defined as a physical test applied to a membrane unit in order to identify and isolate integrity breaches (i.e., one or more leaks that could result in contamination of the filtrate).

(A) The direct integrity test must be independently applied to each membrane unit in service. A membrane unit is defined as a group of membrane modules that share common valving that allows the unit to be isolated from the rest of the system for the purpose of integrity testing or other maintenance.

(B) The direct integrity method must have a resolution of 3 micrometers or less, where resolution is defined as the size of the smallest integrity breach that contributes to a response from the direct integrity test.

(C) The direct integrity test must have a sensitivity sufficient to verify the log treatment credit awarded to the membrane filtration process by the Director, where sensitivity is defined as the maximum log removal value that can be reliably verified by a direct integrity test. Sensitivity must be determined using the approach in either paragraph (b)(iii)(C)(I) or (II) of this section as applicable to the type of direct integrity test the system uses.

(I) For direct integrity tests that use an applied pressure or vacuum, the direct integrity test sensitivity must be calculated according to the following equation: $LRV_{DIT} = \text{LOG}_{10} (Q_p / (VCF \times Q_{breach}))$ Where: LRV_{DIT} = the sensitivity of the direct integrity test; Q_p = total design filtrate flow from the membrane unit; Q_{breach} = flow of water from an integrity breach associated with the smallest integrity test response that can be reliably measured, and VCF = volumetric concentration factor. The volumetric concentration factor is the ratio of the suspended solids concentration on the high pressure side of the membrane relative to that in the feed water.

(II) For direct integrity tests that use a particulate or molecular marker, the direct integrity test sensitivity must be calculated according to the following equation: $LRV_{DIT} = \text{LOG}_{10}(C_f) - \text{LOG}_{10}(C_p)$ Where: LRV_{DIT} = the sensitivity of the direct integrity test; C_f = the typical feed concentration of the marker used in the test; and C_p = the filtrate concentration of the marker from an integral membrane unit.

(D) Systems must establish a control limit within the sensitivity limits of the direct integrity test that is indicative of an integral membrane unit capable of meeting the removal credit awarded by the Director.

(E) If the result of a direct integrity test exceeds the control limit established under paragraph (b)(iii)(D) of this section, the system must remove the membrane unit from service. Systems must conduct a direct integrity test to verify any repairs, and may return the membrane unit to service only if the direct integrity test is within the established control limit.

(F) Systems must conduct direct integrity testing on each membrane unit at a frequency of not less than once each day that the membrane unit is in operation. The Director may approve less frequent testing, based on demonstrated process reliability, the use of multiple barriers effective for Cryptosporidium, or reliable process safeguards.

(iv) Indirect integrity monitoring. Systems must conduct continuous indirect integrity monitoring on each membrane unit according to the criteria in paragraphs (b)(iv)(A) through (E) of this section. Indirect integrity monitoring is defined as monitoring some aspect of filtrate water quality that is indicative of the removal of particulate matter. A system that implements continuous direct integrity testing of membrane units in accordance with the criteria in paragraphs (b)(iii)(A) through (E) of this section is not subject to the requirements for continuous indirect integrity monitoring. Systems must submit a monthly report to the Director summarizing all continuous indirect integrity monitoring results triggering direct integrity testing and the corrective action that was taken in each case.

(A) Unless the Director approves an alternative parameter, continuous indirect integrity monitoring must include continuous filtrate turbidity monitoring.

(B) Continuous monitoring must be conducted at a frequency of no less than once every 15 minutes.

(C) Continuous monitoring must be separately conducted on each membrane unit.

(D) If indirect integrity monitoring includes turbidity and if the filtrate turbidity readings are above 0.15 NTU for a period greater than 15 minutes (i.e., two consecutive 15-minute readings above 0.15 NTU), direct integrity testing must immediately be performed on the associated membrane unit as specified in paragraphs (b)(iii)(A) through (E) of this section.

(E) If indirect integrity monitoring includes a Director-approved alternative parameter and if the alternative parameter exceeds a Director-approved control limit for a period greater than 15 minutes, direct integrity testing must immediately be performed on the associated membrane units as specified in paragraphs (b)(iii)(A) through (E) of this section.

(c) Second stage filtration. Systems receive 0.5-log Cryptosporidium treatment credit for a separate second stage of filtration that consists of sand, dual media, GAC, or other fine

grain media following granular media filtration if the Director approves. To be eligible for this credit, the first stage of filtration must be preceded by a coagulation step and both filtration stages must treat the entire plant flow taken from a surface water or GWUDI source. A cap, such as GAC, on a single stage of filtration is not eligible for this credit. The Director must approve the treatment credit based on an assessment of the design characteristics of the filtration process.

(d) Slow sand filtration (as secondary filter). Systems are eligible to receive 2.5-log Cryptosporidium treatment credit for a slow sand filtration process that follows a separate stage of filtration if both filtration stages treat entire plant flow taken from a surface water or GWUDI source and no disinfectant residual is present in the influent water to the slow sand filtration process. The Director must approve the treatment credit based on an assessment of the design characteristics of the filtration process. This paragraph does not apply to treatment credit awarded to slow sand filtration used as a primary filtration process.

(19) Inactivation toolbox components.

(a) Calculation of CT values. (i) CT is the product of the disinfectant contact time (T, in minutes) and disinfectant concentration (C, in milligrams per liter). Systems with treatment credit for chlorine dioxide or ozone under paragraph (b) or (c) of this section must calculate CT at least once each day, with both C and T measured during peak hourly flow as specified in R309-200-4(3) and (4).

(ii) Systems with several disinfection segments in sequence may calculate CT for each segment, where a disinfection segment is defined as a treatment unit process with a measurable disinfectant residual level and a liquid volume. Under this approach, systems must add the Cryptosporidium CT values in each segment to determine the total CT for the treatment plant.

(b) CT values for chlorine dioxide and ozone. (i) Systems receive the Cryptosporidium treatment credit listed in this paragraph by meeting the corresponding chlorine dioxide CT value for the applicable water temperature, as described in paragraph (a) of this section.

(i) CT values ((MG)(MIN)/L) for Cryptosporidium inactivation by Chlorine Dioxide listed by the log credit with inactivation listed by water temperature in degrees Celsius.

(A) 0.25 Log Credit:

- (I) less than or equal to 0.5 degrees: 159;
- (II) 1 degree: 153;
- (III) 2 degrees: 140;
- (IV) 3 degrees: 128;
- (V) 5 degrees: 107;
- (VI) 7 degrees: 90;
- (VII) 10 degrees: 69;
- (VIII) 15 degrees: 45;
- (IX) 20 degrees: 29;
- (X) 25 degrees: 19; and
- (XI) 30 degrees: 12.

(B) 0.5 Log Credit:

- (I) less than or equal to 0.5 degrees: 319;
- (II) 1 degree: 305;
- (III) 2 degrees: 279;
- (IV) 3 degrees: 256;
- (V) 5 degrees: 214;
- (VI) 7 degrees: 180;
- (VII) 10 degrees: 138;
- (VIII) 15 degrees: 89;
- (IX) 20 degrees: 58;
- (X) 25 degrees: 38; and
- (XI) 30 degrees: 24.

(C) 1.0 Log Credit:

- (I) less than or equal to 0.5 degrees: 637;
- (II) 1 degree: 610;

- (III) 2 degrees: 558;
- (IV) 3 degrees: 511;
- (V) 5 degrees: 429;
- (VI) 7 degrees: 360;
- (VII) 10 degrees: 277;
- (VIII) 15 degrees: 179;
- (IX) 20 degrees: 116;
- (X) 25 degrees: 75; and
- (XI) 30 degrees: 49.

(D) 1.5 Log Credit:

- (I) less than or equal to 0.5 degrees: 956;
- (II) 1 degree: 915;
- (III) 2 degrees: 838;
- (IV) 3 degrees: 767;
- (V) 5 degrees: 643;
- (VI) 7 degrees: 539;
- (VII) 10 degrees: 415;
- (VIII) 15 degrees: 268;
- (IX) 20 degrees: 174;
- (X) 25 degrees: 113; and
- (XI) 30 degrees: 73.

(E) 2.0 Log Credit:

- (I) less than or equal to 0.5 degrees: 1275;
- (II) 1 degree: 1220;
- (III) 2 degrees: 1117;
- (IV) 3 degrees: 1023;
- (V) 5 degrees: 858;
- (VI) 7 degrees: 719;
- (VII) 10 degrees: 553;
- (VIII) 15 degrees: 357;
- (IX) 20 degrees: 232;
- (X) 25 degrees: 150; and
- (XI) 30 degrees: 98.

(F) 2.5 Log Credit:

- (I) less than or equal to 0.5 degrees: 1594;
- (II) 1 degree: 1525;
- (III) 2 degrees: 1396;
- (IV) 3 degrees: 1278;
- (V) 5 degrees: 1072;
- (VI) 7 degrees: 899;
- (VII) 10 degrees: 691;
- (VIII) 15 degrees: 447;
- (IX) 20 degrees: 289;
- (X) 25 degrees: 188; and
- (XI) 30 degrees: 122.

(G) 3.0 Log Credit:

- (I) less than or equal to 0.5 degrees: 1912;
- (II) 1 degree: 1830;
- (III) 2 degrees: 1675;
- (IV) 3 degrees: 1534;
- (V) 5 degrees: 1286;
- (VI) 7 degrees: 1079;
- (VII) 10 degrees: 830;
- (VIII) 15 degrees: 536;
- (IX) 20 degrees: 347;
- (X) 25 degrees: 226; and
- (XI) 30 degrees: 147.

(F) Systems may use this equation to determine log credit based on the indicated values above: $\text{Log credit} = (0.001506 \times (1.09116)^{\text{Temp}}) \times \text{CT}$.

(ii) Systems receive the Cryptosporidium treatment credit listed in this paragraph by meeting the corresponding ozone CT values for the applicable water temperature, as described in paragraph (a) of this section. CT values ((MG)(MIN)/L) for Cryptosporidium inactivation by Ozone listed by the log credit with inactivation listed by water temperature in degrees Celsius.

(A) 0.25 Log Credit:

- (I) less than or equal to 0.5 degrees: 6.0;
- (II) 1 degree: 5.8;

- (III) 2 degrees: 5.2;
- (IV) 3 degrees: 4.8;
- (V) 5 degrees: 4.0;
- (VI) 7 degrees: 3.3;
- (VII) 10 degrees: 2.5;
- (VIII) 15 degrees: 1.6;
- (IX) 20 degrees: 1.0;
- (X) 25 degrees: 0.6; and
- (XI) 30 degrees: 0.39.
- (B) 0.5 Log Credit:
- (I) less than or equal to 0.5 degrees: 12;
- (II) 1 degree: 12;
- (III) 2 degrees: 10;
- (IV) 3 degrees: 9.5;
- (V) 5 degrees: 7.9;
- (VI) 7 degrees: 6.5;
- (VII) 10 degrees: 4.9;
- (VIII) 15 degrees: 3.1;
- (IX) 20 degrees: 2.0;
- (X) 25 degrees: 1.2; and
- (XI) 30 degrees: 0.78.
- (C) 1.0 Log Credit:
- (I) less than or equal to 0.5 degrees: 24;
- (II) 1 degree: 23;
- (III) 2 degrees: 21;
- (IV) 3 degrees: 19;
- (V) 5 degrees: 16;
- (VI) 7 degrees: 13;
- (VII) 10 degrees: 9.9;
- (VIII) 15 degrees: 6.2;
- (IX) 20 degrees: 3.9;
- (X) 25 degrees: 2.5; and
- (XI) 30 degrees: 1.6.
- (D) 1.5 Log Credit:
- (I) less than or equal to 0.5 degrees: 36;
- (II) 1 degree: 35;
- (III) 2 degrees: 31;
- (IV) 3 degrees: 29;
- (V) 5 degrees: 24;
- (VI) 7 degrees: 20;
- (VII) 10 degrees: 15;
- (VIII) 15 degrees: 9.3;
- (IX) 20 degrees: 5.9;
- (X) 25 degrees: 3.7; and
- (XI) 30 degrees: 2.4.
- (E) 2.0 Log Credit:
- (I) less than or equal to 0.5 degrees: 48;
- (II) 1 degree: 46;
- (III) 2 degrees: 42;
- (IV) 3 degrees: 38;
- (V) 5 degrees: 32;
- (VI) 7 degrees: 26;
- (VII) 10 degrees: 20;
- (VIII) 15 degrees: 12;
- (IX) 20 degrees: 7.8;
- (X) 25 degrees: 4.9; and
- (XI) 30 degrees: 3.1.
- (F) 2.5 Log Credit:
- (I) less than or equal to 0.5 degrees: 60;
- (II) 1 degree: 58;
- (III) 2 degrees: 52;
- (IV) 3 degrees: 48;
- (V) 5 degrees: 40;
- (VI) 7 degrees: 33;
- (VII) 10 degrees: 25;
- (VIII) 15 degrees: 16;
- (IX) 20 degrees: 9.8;
- (X) 25 degrees: 6.2; and
- (XI) 30 degrees: 3.9.

- (G) 3.0 Log Credit:
- (I) less than or equal to 0.5 degrees: 72;
- (II) 1 degree: 69;
- (III) 2 degrees: 63;
- (IV) 3 degrees: 57;
- (V) 5 degrees: 47;
- (VI) 7 degrees: 39;
- (VII) 10 degrees: 30;
- (VIII) 15 degrees: 19;
- (IX) 20 degrees: 12;
- (X) 25 degrees: 7.4; and
- (XI) 30 degrees: 4.7.

(F) Systems may use this equation to determine log credit between the indicated values: $\text{Log credit} = (0.0397 \times (1.09757)^{\text{CT}_{\text{emp}}}) \times \text{CT}$.

(c) Site-specific study. The Director may approve alternative chlorine dioxide or ozone CT values to those listed in paragraph (b) above on a site-specific basis. The Director must base this approval on a site-specific study a system conducts that follows a protocol approved by the Director.

(d) Ultraviolet light. Systems receive Cryptosporidium, Giardia lamblia, and virus treatment credits for ultraviolet (UV) light reactors by achieving the corresponding UV dose values shown in paragraph (d)(i) of this section. Systems must validate and monitor UV reactors as described in paragraph (d)(ii) and (iii) of this section to demonstrate that they are achieving a particular UV dose value for treatment credit.

(i) UV dose table. The treatment credits listed in Table 215-5 are for UV light at a wavelength of 254 nm as produced by a low pressure mercury vapor lamp. To receive treatment credit for other lamp types, systems must demonstrate an equivalent germicidal dose through reactor validation testing, as described in paragraph (d)(ii). The UV dose values in Table 215-5 are applicable only to post-filter applications of UV in filtered systems.

TABLE 215-5
UV Dose Table for Cryptosporidium, Giardia lamblia, and Virus Inactivation Credit

Log credit	Cryptosporidium UV dose (mJ/cm ²)	Giardia lamblia UV dose (mJ/cm ²)	Virus UV dose (mJ/cm ²)
0.5	1.6	1.5	39
1.0	2.5	2.1	58
1.5	3.9	3.0	79
2.0	5.8	5.2	100
2.5	8.5	7.7	121
3.0	12	11	143
3.5	15	15	163
4.0	22	22	186

(ii) Reactor validation testing. Systems must use UV reactors that have undergone validation testing to determine the operating conditions under which the reactor delivers the UV dose required in paragraph (d)(i) of this section (i.e., validated operating conditions). These operating conditions must include flow rate, UV intensity as measured by a UV sensor, and UV lamp status.

(A) When determining validated operating conditions, systems must account for the following factors: UV absorbance of the water; lamp fouling and aging; measurement uncertainty of on-line sensors; UV dose distributions arising from the velocity profiles through the reactor; failure of UV lamps or other critical system components; and inlet and outlet piping or channel configurations of the UV reactor.

(B) Validation testing must include the following: Full scale testing of a reactor that conforms uniformly to the UV reactors used by the system and inactivation of a test microorganism whose dose response characteristics have been quantified with a low pressure mercury vapor lamp.

(C) The Director may approve an alternative approach to

validation testing.

(iii) Reactor monitoring.

(A) Systems must monitor their UV reactors to determine if the reactors are operating within validated conditions, as determined under paragraph (d)(ii) of this section. This monitoring must include UV intensity as measured by a UV sensor, flow rate, lamp status, and other parameters the Director designates based on UV reactor operation. Systems must verify the calibration of UV sensors and must recalibrate sensors in accordance with a protocol the Director approves.

(B) To receive treatment credit for UV light, systems must treat at least 95 percent of the water delivered to the public during each month by UV reactors operating within validated conditions for the required UV dose, as described in paragraphs (d)(i) and (ii) of this section. Systems must demonstrate compliance with this condition by the monitoring required under paragraph (d)(iii)(A) of this section.

(20) Reporting requirements.

(a) Systems must report sampling schedules under R309-215-15(3) and source water monitoring results under R309-215-15(7) unless they notify the Director that they will not conduct source water monitoring due to meeting the criteria of R309-215-15(2)(d).

(b) Filtered systems must report their Cryptosporidium bin classification as described in R309-215-15(11).

(c) Systems must report disinfection profiles and benchmarks to the Director as described in R309-215-15(9) through R309-215-15(10) prior to making a significant change in disinfection practice.

(d) Systems must report to the Director in accordance with the following information on the following schedule for any microbial toolbox options used to comply with treatment requirements under R309-215-15(12). Alternatively, the Director may approve a system to certify operation within required parameters for treatment credit rather than reporting monthly operational data for toolbox options.

(i) Watershed control program (WCP).

(A) Notice of intention to develop a new or continue an existing watershed control program no later than two years before the applicable treatment compliance date in R309-215-15(13).

(B) Watershed control plan no later than one year before the applicable treatment compliance date in R309-215-15(13).

(C) Annual watershed control program status report every 12 months, beginning one year after the applicable treatment compliance date in R309-215-15(13).

(D) Watershed sanitary survey report:

(I) For community water systems, every three years beginning three years after the applicable treatment compliance date in R309-215-15(13).

(II) For noncommunity water systems, every five years beginning five years after the applicable treatment compliance date in R309-215-15(13).

(ii) Alternative source/intake management:

(A) Verification that system has relocated the intake or adopted the intake withdrawal procedure reflected in monitoring results no later than the applicable treatment compliance date in R309-215-15(13).

(iii) Presedimentation: Monthly verification of the following:

(A) Continuous basin operation

(B) Treatment of 100% of the flow

(C) Continuous addition of a coagulant

(D) At least 0.5-log mean reduction of influent turbidity or compliance with alternative Director-approved performance criteria.

(E) Monthly reporting within 10 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in R309-215-15(13).

(iv) Two-stage lime softening: Monthly verification of the following:

(A) Chemical addition and hardness precipitation occurred in two separate and sequential softening stages prior to filtration.

(B) Both stages treated 100% of the plant flow.

(C) Monthly reporting within 10 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in R309-215-15(13).

(v) Bank filtration:

(A) Initial demonstration of the following no later than the applicable treatment compliance date in R309-215-15(13).

(I) Unconsolidated, predominantly sandy aquifer

(II) Setback distance of at least 25 ft. (0.5-log credit) or 50 ft. (1.0-log credit).

(B) If monthly average of daily max turbidity is greater than 1 NTU then system must report result and submit an assessment of the cause. The report is due within 30 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in R309-215-15(13).

(vi) Combined filter performance:

(A) Monthly verification of combined filter effluent (CFE) turbidity levels less than or equal to 0.15 NTU in at least 95 percent of the 4 hour CFE measurements taken each month.

(B) Monthly reporting within 10 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in R309-215-15(13).

(vii) Individual filter performance. Monthly verification of the following:

(A) Individual filter effluent (IFE) turbidity levels less than or equal to 0.15 NTU in at least 95 percent of samples each month in each filter.

(B) No individual filter greater than 0.3 NTU in two consecutive readings 15 minutes apart.

(C) Monthly reporting within 10 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in R309-215-15(13).

(viii) Demonstration of performance.

(A) Results from testing following a Director approved protocol no later than the applicable treatment compliance date in R309-215-15(13).

(B) As required by the Director, monthly verification of operation within conditions of Director approval for demonstration of performance credit within 10 days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in R309-215-15(13).

(ix) Bag filters and cartridge filters.

(A) Demonstration that the following criteria are met no later than the applicable treatment compliance date in R309-215-15(13).

(I) Process meets the definition of bag or cartridge filtration;

(II) Removal efficiency established through challenge testing that meets criteria in this subpart.

(B) Monthly verification that 100% of plant flow was filtered within 10 days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in R309-215-15(13).

(x) Membrane filtration.

(A) Results of verification testing demonstrating the following no later than the applicable treatment compliance date in R309-215-15(13).

(I) Removal efficiency established through challenge testing that meets criteria in this subpart;

(II) Integrity test method and parameters, including resolution, sensitivity, test frequency, control limits, and associated baseline.

(B) Monthly report summarizing the following within 10

days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in R309-215-15(13).

(I) All direct integrity tests above the control limit;

(II) If applicable, any turbidity or alternative Director-approved indirect integrity monitoring results triggering direct integrity testing and the corrective action that was taken.

(xi) Second stage filtration: Monthly verification that 100% of flow was filtered through both stages and that first stage was preceded by coagulation step within 10 days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in R309-215-15(13).

(xii) Slow sand filtration (as secondary filter): Monthly verification that both a slow sand filter and a preceding separate stage of filtration treated 100% of flow from surface water sources within 10 days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in R309-215-15(13).

(xiii) Chlorine dioxide: Summary of CT values for each day as described in R309-215-15(19) within 10 days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in R309-215-15(13).

(xiv) Ozone: Summary of CT values for each day as described in R309-215-15(19) within 10 days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in R309-215-15(13).

(xv) UV:

(A) Validation test results demonstrating operating conditions that achieve required UV dose no later than the applicable treatment compliance date in R309-215-15(13).

(B) Monthly report summarizing the percentage of water entering the distribution system that was not treated by UV reactors operating within validated conditions for the required dose as specified in R309-215-15(19) (d) within 10 days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in R309-215-15(13).

(21) Recordkeeping requirements.

(a) Systems must keep results from the initial round of source water monitoring under R309-215-15(2)(a) and the second round of source water monitoring under R309-215-15(2)(b) until 3 years after bin classification under R309-215-15(11) for filtered systems for the particular round of monitoring.

(b) Systems must keep any notification to the Director that they will not conduct source water monitoring due to meeting the criteria of R309-215-15(2)(d) for 3 years.

(c) Systems must keep the results of treatment monitoring associated with microbial toolbox options under R309-215-15(15) through R309-215-15(19) for 3 years.

(22) Requirements for Sanitary Surveys Performed by EPA. Requirements to respond to significant deficiencies identified in sanitary surveys performed by EPA.

(a) A sanitary survey is an onsite review of the water source (identifying sources of contamination by using results of source water assessments where available), facilities, equipment, operation, maintenance, and monitoring compliance of a PWS to evaluate the adequacy of the PWS, its sources and operations, and the distribution of safe drinking water.

(b) For the purposes of this section, a significant deficiency includes a defect in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that EPA determines to be causing, or has the potential for causing the introduction of contamination into the water delivered to consumers.

(c) For sanitary surveys performed by EPA, systems must respond in writing to significant deficiencies identified in sanitary survey reports no later than 45 days after receipt of the

report, indicating how and on what schedule the system will address significant deficiencies noted in the survey.

(d) Systems must correct significant deficiencies identified in sanitary survey reports according to the schedule approved by EPA, or if there is no approved schedule, according to the schedule reported under paragraph (c) of this section if such deficiencies are within the control of the system.

R309-215-16. Groundwater Rule.

(1) Applicability: This subpart applies to all public water systems that use ground water except that it does not apply to public water systems that combine all of their ground water with surface water or with ground water under the direct influence of surface water prior to treatment. For the purposes of this subpart, "ground water system" is defined as any public water system meeting this applicability, including consecutive systems receiving finished ground water.

(a) General requirements: Systems subject to this subpart must comply with the following requirements:

(i) Sanitary survey information requirements for all ground water systems as described in R309-100-7.

(ii) Microbial source water monitoring requirements for ground water systems that do not treat all of their ground water to at least 99.99 percent (4-log) treatment of viruses (using inactivation, removal, or an Director-approved combination of 4-log virus inactivation and removal) before or at the first customer as described in R309-215-16(2).

(iii) Treatment technique requirements, described in R309-215-16(3), that apply to ground water systems that have fecally contaminated source waters, as determined by source water monitoring conducted under R309-215-16(2), or that have significant deficiencies that are identified by the Director or that are identified by EPA under SDWA section 1445. A ground water system with fecally contaminated source water or with significant deficiencies subject to the treatment technique requirements of this subpart must implement one or more of the following corrective action options: correct all significant deficiencies; provide an alternate source of water; eliminate the source of contamination; or provide treatment that reliably achieves at least 4-log treatment of viruses (using inactivation, removal, or a Director-approved combination of 4-log virus inactivation and removal) before or at the first customer.

(b) Ground water systems that provide at least 4-log treatment of viruses (using inactivation, removal, or a Director-approved combination of 4-log virus inactivation and removal) before or at the first customer are required to conduct compliance monitoring to demonstrate treatment effectiveness, as described in R309-215-16(3)(b).

(c) If requested by the Director, ground water systems must provide the Director with any existing information that will enable the Director to perform a hydrogeologic sensitivity assessment. For the purposes of this subpart, "hydrogeologic sensitivity assessment" is a determination of whether ground water systems obtain water from hydrogeologically sensitive settings.

(d) Compliance date: Ground water systems must comply, unless otherwise noted, with the requirements of this subpart beginning December 1, 2009.

(2) Ground water source microbial monitoring and analytical methods.

(a) Triggered source water monitoring.

(i) General requirements. A ground water system must conduct triggered source water monitoring if the conditions identified in paragraphs (a)(i)(A) and (a)(i)(B) of this section exist.

(A) The system does not provide at least 4-log treatment of viruses (using inactivation, removal, or a Director-approved combination of 4-log virus inactivation and removal) before or at the first customer for each ground water source; and

(B) The system is notified that a sample collected under R309-211 is total coliform-positive and the sample is not invalidated under R309-211-10.

(ii) Sampling Requirements. A ground water system must collect, within 24 hours of notification of the total coliform-positive sample, at least one ground water source sample from each ground water source in use at the time the total coliform-positive sample was collected under R309-211, except as provided in paragraph (a)(ii)(B) of this section.

(A) The Director may extend the 24-hour time limit on a case-by-case basis if the system cannot collect the ground water source water sample within 24 hours due to circumstances beyond its control. In the case of an extension, the Director must specify how much time the system has to collect the sample.

(B) If approved by the Director, systems with more than one ground water source may meet the requirements of this paragraph (a)(ii) by sampling a representative ground water source or sources. Systems must submit for Director approval a triggered source water monitoring plan that identifies one or more ground water sources that are representative of each monitoring site in the system's sample site plan under R309-211-4(1) and that the system intends to use for representative sampling under this paragraph.

(C) A ground water system serving 1,000 or fewer people may use a repeat sample collected from a ground water source to meet both the requirements of R309-211-7(1) and to satisfy the monitoring requirements of paragraph (a)(ii) of this section for that ground water source only if the Director approves the use of *E. coli* as a fecal indicator for source water monitoring under this paragraph (a) and approves the use of a single sample for meeting both the triggered source water monitoring requirements in this paragraph (a) and the repeat monitoring requirements in R309-211-7. If the repeat sample collected from the ground water source is *E. coli* positive, the system must comply with paragraph (a)(iii) of this section.

(iii) Additional Requirements. If the Director does not require corrective action under R309-215-16(3)(a)(ii) for a fecal indicator-positive source water sample collected under paragraph (a)(ii) of this section that is not invalidated under paragraph (c) of this section, the system must collect five additional source water samples from the same source within 24 hours of being notified of the fecal indicator-positive sample.

(iv) Consecutive and Wholesale Systems.

(A) In addition to the other requirements of this paragraph (a), a consecutive ground water system that has a total coliform-positive sample collected under R309-211 must notify the wholesale system(s) within 24 hours of being notified of the total coliform-positive sample.

(B) In addition to the other requirements of this paragraph (a), a wholesale ground water system must comply with paragraphs (a)(iv)(B)(I) and (a)(iv)(B)(II) of this section.

(I) A wholesale ground water system that receives notice from a consecutive system it serves that a sample collected under R309-211-5 and 6 is total coliform-positive must, within 24 hours of being notified, collect a sample from its ground water source(s) under paragraph (a)(ii) of this section and analyze it for a fecal indicator under paragraph (c) of this section.

(II) If the sample collected under paragraph (a)(iv)(B)(I) of this section is fecal indicator-positive, the wholesale ground water system must notify all consecutive systems served by that ground water source of the fecal indicator source water positive within 24 hours of being notified of the ground water source sample monitoring result and must meet the requirements of paragraph (a)(iii) of this section.

(v) Exceptions to the Triggered Source Water Monitoring Requirements. A ground water system is not required to comply with the source water monitoring requirements of paragraph

(2)(a) of this section if either of the following conditions exists:

(A) The Director determines, and documents in writing, that the total coliform-positive sample collected under R309-211-5 and 6 is caused by a distribution system deficiency; or

(B) The total coliform-positive sample collected under R309-211-5 and 6 is collected at a location that meets Director criteria for distribution system conditions that will cause total coliform-positive samples.

(b) Assessment Source Water Monitoring. If directed by the Director, ground water systems must conduct assessment source water monitoring that meets Director-determined requirements for such monitoring. A ground water system conducting assessment source water monitoring may use a triggered source water sample collected under paragraph (a)(ii) of this section to meet the requirements of paragraph (b) of this section. Director-determined assessment source water monitoring requirements may include:

(i) collection of a total of 12 ground water source samples that represent each month the system provides ground water to the public,

(ii) collection of samples from each well unless the system obtains written Director approval to conduct monitoring at one or more wells within the ground water system that are representative of multiple wells used by that system and that draw water from the same hydrogeologic setting,

(iii) collection of a standard sample volume of at least 100 mL for fecal indicator analysis regardless of the fecal indicator or analytical method used,

(iv) analysis of all ground water source samples in accordance with R309-210-4(1) and R309-200-4(3) for the presence of *E. coli*, enterococci, or coliphage,

(v) collection of ground water source samples at a location prior to any treatment of the ground water source unless the Director approves a sampling location after treatment, and

(vi) collection of ground water source samples at the well itself unless the system's configuration does not allow for sampling at the well itself and the Director approves an alternate sampling location that is representative of the water quality of that well.

(c) Invalidation of a fecal indicator-positive ground water source sample.

(i) A ground water system may obtain Director invalidation of a fecal indicator-positive ground water source sample collected under paragraph (a) of this section only under the conditions specified in paragraphs (c)(i)(A) and (B) of this section.

(A) The system provides the Director with written notice from the laboratory that improper sample analysis occurred; or

(B) The Director determines and documents in writing that there is substantial evidence that a fecal indicator-positive ground water source sample is not related to source water quality.

(ii) If the Director invalidates a fecal indicator-positive ground water source sample, the ground water system must collect another source water sample under paragraph (a) of this section within 24 hours of being notified by the Director of its invalidation decision and have it analyzed for the same fecal indicator using the analytical methods in paragraph (c) of this section. The Director may extend the 24-hour time limit on a case-by-case basis if the system cannot collect the source water sample within 24 hours due to circumstances beyond its control. In the case of an extension, the Director must specify how much time the system has to collect the sample.

(d) Sampling location.

(i) Any ground water source sample required under paragraph (a) of this section must be collected at a location prior to any treatment of the ground water source unless the Director approves a sampling location after treatment.

(ii) If the system's configuration does not allow for

sampling at the well itself, the system may collect a sample at a Director-approved location to meet the requirements of paragraph (a) of this section if the sample is representative of the water quality of that well.

(e) New Sources. If directed by the Director, a ground water system that places a new ground water source into service after November 30, 2009, must conduct assessment source water monitoring under paragraph (b) of this section. If directed by the Director, the system must begin monitoring before the ground water source is used to provide water to the public.

(f) Public Notification. A ground water system with a ground water source sample collected under paragraph (a) or (b) of this section that is fecal indicator-positive and that is not invalidated under paragraph (d) of this section, including consecutive systems served by the ground water source, must conduct public notification under R309-220-5.

(g) Monitoring Violations. Failure to meet the requirements of paragraphs (a)-(f) of this section is a monitoring violation and requires the ground water system to provide public notification under R309-220-7.

(3) Treatment technique requirements for ground water systems.

(a) Ground water systems with significant deficiencies or source water fecal contamination.

(i) The treatment technique requirements of this section must be met by ground water systems when a significant deficiency is identified or when a ground water source sample collected under R309-215-16(2)(a)(iii) is fecal indicator-positive.

(ii) If directed by the Director, a ground water system with a ground water source sample collected under R309-215-16(2)(a)(ii), R309-215-16(2)(a)(iv), or R309-215-16(2)(b) that is fecal indicator-positive must comply with the treatment technique requirements of this section.

(iii) When a significant deficiency is identified at a public water system that uses both ground water and surface water or ground water under the direct influence of surface water, the system must comply with provisions of this paragraph except in cases where the Director determines that the significant deficiency is in a portion of the distribution system that is served solely by surface water or ground water under the direct influence of surface water.

(iv) Unless the Director directs the ground water system to implement a specific corrective action, the ground water system must consult with the Director regarding the appropriate corrective action within 30 days of receiving written notice from the Director of a significant deficiency, written notice from a laboratory that a ground water source sample collected under R309-215-16(2)(a)(iii) was found to be fecal indicator-positive, or direction from the Director that a fecal indicator-positive sample collected under R309-215-16(2)(a)(ii), R309-215-16(2)(a)(iv), or R309-215-16(2)(b) requires corrective action. For the purposes of this subpart, significant deficiencies include, but are not limited to, defects in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that the Director determines to be causing, or have potential for causing, the introduction of contamination into the water delivered to consumers.

(v) Within 120 days (or earlier if directed by the Director) of receiving written notification from the Director of a significant deficiency, written notice from a laboratory that a ground water source sample collected under R309-215-16(2)(a)(iii) was found to be fecal indicator-positive, or direction from the Director that a fecal indicator-positive sample collected under R309-215-16(2)(a)(ii), R309-215-16(2)(a)(iv), or R309-215-16(2)(b) requires corrective action, the ground water system must either:

(A) have completed corrective action in accordance with applicable Director plan review processes or other Director

guidance or direction, if any, including Director-specified interim measures; or

(B) be in compliance with a Director-approved corrective action plan and schedule subject to the conditions specified in paragraphs (a)(v)(B)(I) and (a)(v)(B)(II) of this section.

(I) Any subsequent modifications to a Director-approved corrective action plan and schedule must also be approved by the Director.

(II) If the Director specifies interim measures for protection of the public health pending Director approval of the corrective action plan and schedule or pending completion of the corrective action plan, the system must comply with these interim measures as well as with any schedule specified by the Director.

(vi) Corrective Action Alternatives. Ground water systems that meet the conditions of paragraph (a)(i) or (a)(ii) of this section must implement one or more of the following corrective action alternatives:

(A) correct all significant deficiencies;

(B) provide an alternate source of water;

(C) eliminate the source of contamination; or

(D) provide treatment that reliably achieves at least 4-log treatment of viruses (using inactivation, removal, or a Director-approved combination of 4-log virus inactivation and removal) before or at the first customer for the ground water source.

(vii) Special notice to the public of significant deficiencies or source water fecal contamination.

(A) In addition to the applicable public notification requirements of R309-220-5, a community ground water system that receives notice from the Director of a significant deficiency or notification of a fecal indicator-positive ground water source sample that is not invalidated by the Director under R309-215-16(2)(d) must inform the public served by the water system under R309-225-5(8) of the fecal indicator-positive source sample or of any significant deficiency that has not been corrected. The system must continue to inform the public annually until the significant deficiency is corrected or the fecal contamination in the ground water source is determined by the Director to be corrected under paragraph (a)(v) of this section.

(B) In addition to the applicable public notification requirements of R309-220-5, a non-community ground water system that receives notice from the Director of a significant deficiency must inform the public served by the water system in a manner approved by the Director of any significant deficiency that has not been corrected within 12 months of being notified by the Director, or earlier if directed by the Director. The system must continue to inform the public annually until the significant deficiency is corrected. The information must include:

(I) The nature of the significant deficiency and the date the significant deficiency was identified by the Director;

(II) The Director-approved plan and schedule for correction of the significant deficiency, including interim measures, progress to date, and any interim measures completed; and

(III) For systems with a large proportion of non-English speaking consumers, as determined by the Director, information in the appropriate language(s) regarding the importance of the notice or a telephone number or address where consumers may contact the system to obtain a translated copy of the notice or assistance in the appropriate language.

(C) If directed by the Director, a non-community water system with significant deficiencies that have been corrected must inform its customers of the significant deficiencies, how the deficiencies were corrected, and the dates of correction under paragraph (a)(vii)(B) of this section.

(b) Compliance monitoring.

(i) Existing ground water sources. A ground water system that is not required to meet the source water monitoring

requirements of this subpart for any ground water source because it provides at least 4-log treatment of viruses (using inactivation, removal, or a Director-approved combination of 4-log virus inactivation and removal) before or at the first customer for any ground water source before December 1, 2009, must notify the Director in writing that it provides at least 4-log treatment of viruses (using inactivation, removal, or a Director-approved combination of 4-log virus inactivation and removal) before or at the first customer for the specified ground water source and begin compliance monitoring in accordance with paragraph (b)(iii) of this section by December 1, 2009. Notification to the Director must include engineering, operational, or other information that the Director requests to evaluate the submission. If the system subsequently discontinues 4-log treatment of viruses (using inactivation, removal, or a Director-approved combination of 4-log virus inactivation and removal) before or at the first customer for a ground water source, the system must conduct ground water source monitoring as required under R309-215-16(2).

(ii) New ground water sources. A ground water system that places a ground water in service after November 30, 2009, that is not required to meet the source water monitoring requirements of this subpart because the system provides at least 4-log treatment of viruses (using inactivation, removal, or a Director-approved combination of 4-log virus inactivation and removal) before or at the first customer for the ground water source must comply with the requirements of paragraphs (b)(ii)(A), (b)(ii)(B) and (b)(ii)(C) of this section.

(A) The system must notify the Director in writing that it provides at least 4-log treatment of viruses (using inactivation, removal, or a Director-approved combination of 4-log virus inactivation and removal) before or at the first customer for the ground water source. Notification to the Director must include engineering, operational, or other information that the Director requests to evaluate the submission.

(B) The system must conduct compliance monitoring as required under R309-215-16(3)(b)(iii) of this subpart within 30 days of placing the source in service.

(C) The system must conduct ground water source monitoring under R309-215-16(2) if the system subsequently discontinues 4-log treatment of viruses (using inactivation, removal, or a Director-approved combination of 4-log virus inactivation and removal) before or at the first customer for the ground water source.

(iii) Monitoring requirements. A ground water system subject to the requirements of paragraph (b)(i) or (b)(ii) of this section must monitor the effectiveness and reliability of treatment for that ground water source before or at the first customer as follows:

(A) Chemical disinfection.

(I) Ground water systems serving greater than 3,300 people. A ground water system that serves greater than 3,300 people must continuously monitor the residual disinfectant concentration using analytical methods specified in R444-14-4 at a location approved by the Director and must record the lowest residual disinfectant concentration each day that water from the ground water source is served to the public. The ground water system must maintain the Director-determined residual disinfectant concentration every day the ground water system serves water from the ground water source to the public. If there is a failure in the continuous monitoring equipment, the ground water system must conduct grab sampling every four hours until the continuous monitoring equipment is returned to service. The system must resume continuous residual disinfectant monitoring within 14 days.

(II) Ground water systems serving 3,300 or fewer people. A ground water system that serves 3,300 or fewer people must monitor the residual disinfectant concentration using analytical methods specified in R444-14-4 at a location approved by the

Director and record the residual disinfection concentration each day that water from the ground water source is served to the public. The ground water system must maintain the Director-determined residual disinfectant concentration every day the ground water system serves water from the ground water source to the public. The ground water system must take a daily grab sample during the hour of peak flow or at another time specified by the Director. If any daily grab sample measurement falls below the Director-determined residual disinfectant concentration, the ground water system must take follow-up samples every four hours until the residual disinfectant concentration is restored to the Director-determined level. Alternatively, a ground water system that serves 3,300 or fewer people may monitor continuously and meet the requirements of paragraph (b)(iii)(A)(I) of this section.

(B) Membrane filtration. A ground water system that uses membrane filtration to meet the requirements of this subpart must monitor the membrane filtration process in accordance with all Director-specified monitoring requirements and must operate the membrane filtration in accordance with all Director-specified compliance requirements. A ground water system that uses membrane filtration is in compliance with the requirement to achieve at least 4-log removal of viruses when:

(I) The membrane has an absolute molecular weight cut-off (MWCO), or an alternate parameter that describes the exclusion characteristics of the membrane, that can reliably achieve at least 4-log removal of viruses;

(II) The membrane process is operated in accordance with Director-specified compliance requirements; and

(III) The integrity of the membrane is intact.

(C) Alternative treatment. A ground water system that uses a Director-approved alternative treatment to meet the requirements of this subpart by providing at least 4-log treatment of viruses (using inactivation, removal, or a Director-approved combination of 4-log virus inactivation and removal) before or at the first customer must:

(I) Monitor the alternative treatment in accordance with all Director-specified monitoring requirements; and

(II) Operate the alternative treatment in accordance with all compliance requirements that the Director determines to be necessary to achieve at least 4-log treatment of viruses.

(c) Discontinuing treatment. A ground water system may discontinue 4-log treatment of viruses (using inactivation, removal, or a Director-approved combination of 4-log virus inactivation and removal) before or at the first customer for a ground water source if the Director determines and documents in writing that 4-log treatment of viruses is no longer necessary for that ground water source. A system that discontinues 4-log treatment of viruses is subject to the source water monitoring and analytical methods requirements of R309-215-16(2) of this subpart.

(d) Failure to meet the monitoring requirements of paragraph (b) of this section is a monitoring violation and requires the ground water system to provide public notification under R309-220-7.

(4) Treatment technique violations for ground water systems.

(a) A ground water system with a significant deficiency is in violation of the treatment technique requirement if, within 120 days (or earlier if directed by the Director) of receiving written notice from the Director of the significant deficiency, the system:

(i) Does not complete corrective action in accordance with any applicable Director plan review processes or other Director guidance and direction, including Director specified interim actions and measures, or

(ii) Is not in compliance with a Director-approved corrective action plan and schedule.

(b) Unless the Director invalidates a fecal indicator-

positive ground water source sample under R309-215-16(2)(d), a ground water system is in violation of the treatment technique requirement if, within 120 days (or earlier if directed by the Director) of meeting the conditions of R309-215-16(3)(a)(i) or R309-215-16(3)(a)(ii), the system:

(i) Does not complete corrective action in accordance with any applicable Director plan review processes or other Director guidance and direction, including Director-specified interim measures, or

(ii) Is not in compliance with a Director-approved corrective action plan and schedule.

(c) A ground water system subject to the requirements of R309-215-16(3)(b)(iii) that fails to maintain at least 4-log treatment of viruses (using inactivation, removal, or a Director-approved combination of 4-log virus inactivation and removal) before or at the first customer for a ground water source is in violation of the treatment technique requirement if the failure is not corrected within four hours of determining the system is not maintaining at least 4-log treatment of viruses before or at the first customer.

(d) Ground water system must give public notification under R309-220-6 for the treatment technique violations specified in paragraphs (a), (b) and (c) of this section.

(5) Reporting and recordkeeping for ground water systems.

(a) Reporting. In addition to the requirements of R309-105-16, a ground water system regulated under this subpart must provide the following information to the Director:

(i) A ground water system conducting compliance monitoring under R309-215-16(3)(b) must notify the Director any time the system fails to meet any Director-specified requirements including, but not limited to, minimum residual disinfectant concentration, membrane operating criteria or membrane integrity, and alternative treatment operating criteria, if operation in accordance with the criteria or requirements is not restored within four hours. The ground water system must notify the Director as soon as possible, but in no case later than the end of the next business day.

(ii) After completing any corrective action under R309-215-16(3)(a), a ground water system must notify the Director within 30 days of completion of the corrective action.

(iii) If a ground water system subject to the requirements of R309-215-16(2)(a) does not conduct source water monitoring under R309-215-16(2)(a)(v)(B), the system must provide documentation to the Director within 30 days of the total coliform positive sample that it met the Director criteria.

(b) Recordkeeping. In addition to the requirements of R309-105-17, a ground water system regulated under this subpart must maintain the following information in its records:

(i) Documentation of corrective actions. Documentation shall be kept for a period of not less than ten years.

(ii) Documentation of notice to the public as required under R309-215-16(3)(a)(vii). Documentation shall be kept for a period of not less than three years.

(iii) Records of decisions under R309-215-16(2)(a)(v)(B) and records of invalidation of fecal indicator-positive ground water source samples under R309-215-16(2)(d). Documentation shall be kept for a period of not less than five years.

(iv) For consecutive systems, documentation of notification to the wholesale system(s) of total-coliform positive samples that are not invalidated under R309-211-10. Documentation shall be kept for a period of not less than five years.

(v) For systems, including wholesale systems, that are required to perform compliance monitoring under R309-215-16(3)(b):

(A) Records of the Director-specified minimum disinfectant residual. Documentation shall be kept for a period of not less than ten years.

(B) Records of the lowest daily residual disinfectant

concentration and records of the date and duration of any failure to maintain the Director-prescribed minimum residual disinfectant concentration for a period of more than four hours. Documentation shall be kept for a period of not less than five years.

(C) Records of Director-specified compliance requirements for membrane filtration and of parameters specified by the Director for Director-approved alternative treatment and records of the date and duration of any failure to meet the membrane operating, membrane integrity, or alternative treatment operating requirements for more than four hours. Documentation shall be kept for a period of not less than five years.

KEY: drinking water, surface water treatment plant monitoring, disinfection monitoring, compliance determinations

May 1, 2016

19-4-104

Notice of Continuation March 13, 2015

R309. Environmental Quality, Drinking Water.**R309-220. Monitoring and Water Quality: Public Notification Requirements.****R309-220-1. Purpose.**

The purpose of this rule is to outline the public notification requirements for public water systems.

R309-220-2 Authority.

R309-220-3 Definitions.

R309-220-4 General public notification requirements.

R309-220-5 Tier 1 Public Notice - Form, manner, and frequency of notice.

R309-220-6 Tier 2 Public Notice - Form, manner, and frequency of notice.

R309-220-7 Tier 3 Public Notice - Form, manner, and frequency of notice.

R309-220-8 Content of the public notice.

R309-220-9 Notice to new billing units or new customers.

R309-220-10 Special notice of the availability of unregulated contaminant monitoring results.

R309-220-11 Special notice for exceedance of the SMCL for fluoride.

R309-220-12 Special notice for nitrate exceedances above MCL by non-community water systems (NCWS), where granted permission by the Director.

R309-220-13 Special Notice for Repeated Failure to Conduct Monitoring of the Source Water for Cryptosporidium and for Failure to Determine Bin Classification or Mean Cryptosporidium Level.

R309-220-14 Notice by Director on behalf of the public water system.

R309-220-15 Standard Health Effects Language.

R309-220-2. Authority.

This rule is promulgated by the Drinking Water Board as authorized by Title 19, Environmental Quality Code, Chapter 4, Safe Drinking Water Act, Subsection 104 of the Utah Code and in accordance with 63G-3 of the same, known as the Administrative Rulemaking Act.

R309-220-3. Definitions.

Definitions for certain terms used in this rule are given in R309-110 but may be further clarified herein.

R309-220-4. General Public Notification Requirements.

(1) Violation Categories and Other Situations Requiring a Public Notice:

Each owner or operator of a public water system (community water systems, non-transient non-community water systems, and transient non-community water systems) must give notice for all violations of these rules and for other situations, as listed below. The term "UPDWR violations" is used in this subpart to include violations of the maximum contaminant level (MCL), maximum residual disinfection level (MRDL), treatment technique (TT), monitoring requirements, and testing procedures contained in R309-100 through R309-215.

(a) UPDWR Violations:

(i) Failure to comply with an applicable maximum contaminant level (MCL) or maximum residual disinfectant level (MRDL).

(ii) Failure to comply with a prescribed treatment technique (TT).

(iii) Failure to perform water quality monitoring, as required by the drinking water regulations.

(iv) Failure to comply with testing procedures as prescribed by a drinking water regulation.

(b) Variance and Exemptions Under R309-10 and R309-11.

(i) Operation under a variance or an exemption.

(ii) Failure to comply with the requirements of any

schedule that has been set under a variance or exemption.

(c) Special Public Notices

(i) Occurrence of a waterborne disease outbreak or other waterborne emergency.

(ii) Exceedance of the nitrate MCL by non-community water systems (NCWS), where granted permission by the Director under R309-200-5(1)(c), Table 200-1, note (4)(b).

(iii) Exceedance of the secondary maximum contaminant level (SMCL) for fluoride.

(iv) Availability of unregulated contaminant monitoring data.

(v) Other violations and situations determined by the Director to require a public notice under this subpart.

(2) Definition of Public Notice Tiers:

Public notice requirements are divided into three tiers, to take into account the seriousness of the violation or situation and of any potential adverse health effects that may be involved. The public notice requirements for each violation or situation listed in paragraph (1) of this section are determined by the tier to which it is assigned. Each tier is defined below:

(a) Tier 1 public notice -- required for UPDWR violations and situations with significant potential to have serious adverse effects on human health as a result of short-term exposure.

(b) Tier 2 public notice -- required for all other UPDWR violations and situations with potential to have serious adverse effects on human health.

(c) Tier 3 public notice -- required for all other UPDWR violations and situations not included in Tier 1 and Tier 2.

(3) Required Distribution of Notice

(a) Each public water system must provide public notice to persons served by the water system, in accordance with this rule. Public water systems that sell or otherwise provide drinking water to other public water systems (i.e., to consecutive systems) are required to give public notice to the owner or operator of the consecutive system; the consecutive system is responsible for providing public notice to the persons it serves.

(b) If a public water system has a violation in a portion of the distribution system that is physically or hydraulically isolated from other parts of the distribution system, the Director may allow the system to limit distribution of the public notice to only persons served by that portion of the system which is out of compliance. Permission by the Director for limiting distribution of the notice must be granted in writing.

(c) A copy of the notice must also be sent to the Director, in accordance with the requirements under R309-105-16.

R309-220-5. Tier 1 Public Notice -- Form, Manner and Frequency of Notice.

(1) Violation Categories and Other Situations Requiring a Tier 1 Public Notice:

(a) Violation of the MCL for total coliforms when E. coli are present, as defined in R309-211-9(1);

(b) Violation of the MCL for nitrate, nitrite, or total nitrate and nitrite, as defined in R309-200-5(1)(c), Table 200-1, or when the water system fails to take a confirmation sample within 24 hours of the system's receipt of the first sample showing an exceedance of the nitrate or nitrite MCL, as specified in R309-205-5(1)(e)(ii);

(c) Exceedance of the nitrate MCL by non-community water systems, where permitted to exceed the MCL by the Director under R309-200-5(1)(c), Table 200-1, note (4)(b), as required under R309-220-12;

(d) Violation of the MRDL for chlorine dioxide, as defined in 40 CFR section 141.65(a), when one or more samples taken in the distribution system the day following an exceedance of the MRDL at the entrance of the distribution system exceed the MRDL, or when the water system does not take the required samples in the distribution system, as specified in 40 CFR section 141.133(c)(2)(i);

(e) Violation of the turbidity MCL under R309-200-5(5)(a), where the Director determines after consultation that a Tier 1 notice is required or where consultation does not take place within 24 hours after the system learns of the violation;

(f) Violation of the Surface Water Treatment Rule (SWTR), Interim Enhanced Surface Water Treatment rule (IESWTR) or the Long Term 1 Enhanced Surface Water Treatment rule (LT1ESWTR) treatment technique requirement resulting from a single exceedance of the maximum allowable turbidity limit, where the Director determines after consultation that a Tier 1 notice is required or where consultation does not take place within 24 hours after the system learns of the violation;

(g) Occurrence of a waterborne disease outbreak, as defined in R309-110, or other waterborne emergency (such as a failure or significant interruption in key water treatment processes, a natural disaster that disrupts the water supply or distribution system, or a chemical spill or unexpected loading of possible pathogens into the source water that significantly increases the potential for drinking water contamination);

(h) Other violations or situations with significant potential to have serious adverse effects on human health as a result of short-term exposure, as determined by the Director either in its rules or on a case-by-case basis.

(i) Detection of E. coli, enterococci, or coliphage in source water samples as specified in R309-215-16(2)(a) and R309-215-16(2)(b).

(2) Frequency of the Tier 1 Public Notice and Additional Steps Required:

Public water systems must:

(a) Provide a public notice as soon as practical but no later than 24 hours after the system learns of the violation;

(b) Initiate consultation with the Director as soon as practical, but no later than 24 hours after the public water system learns of the violation or situation, to determine additional public notice requirements; and

(c) Comply with any additional public notification requirements (including any repeat notices or direction on the duration of the posted notices) that are established as a result of the consultation with the Director. Such requirements may include the timing, form, manner, frequency, and content of repeat notices (if any) and other actions designed to reach all persons served.

(3) Form and Manner of the Public Notice:

Public water systems must provide the notice within 24 hours in a form and manner reasonably calculated to reach all persons served. The form and manner used by the public water system are to fit the specific situation, but must be designed to reach residential, transient, and non-transient users of the water system. In order to reach all persons served, water systems are to use, at a minimum, one or more of the following forms of delivery:

(a) Appropriate broadcast media (such as radio and television);

(b) Posting of the notice in conspicuous locations throughout the area served by the water system;

(c) Hand delivery of the notice to persons served by the water system; or

(d) Another delivery method approved in writing by the Director.

R309-220-6. Tier 2 Public Notice -- Form, Manner and Frequency of Notice.

(1) Violation Categories And Other Situations Requiring a Tier 2 Public Notice:

(a) All violations of the MCL, MRDL, seasonal system treatment technique requirements, and treatment technique requirements, except where a Tier 1 notice is required under R309-220-5(1) or where the Director determines that a Tier 1

notice is required;

(b) Violations of the monitoring and testing procedure requirements, where the Director determines that a Tier 2 rather than a Tier 3 public notice is required, taking into account potential health impacts and persistence of the violation; and

(c) Failure to comply with the terms and conditions of any variance or exemption in place.

(d) Failure to take corrective action or failure to maintain at least 4-log treatment of viruses (using inactivation, removal, or an Director-approved combination of 4-log virus inactivation and removal) before or at the first customer under R309-215-16(3)(a).

(2) Frequency of the Tier 2 Public Notice:

(a) Public water systems must provide the public notice as soon as practical, but no later than 30 days after the system learns of the violation. If the public notice is posted, the notice must remain in place for as long as the violation or situation persists, but in no case for less than seven days, even if the violation or situation is resolved. The Director may, in appropriate circumstances, allow additional time for the initial notice of up to three months from the date the system learns of the violation. It is not appropriate for the Director to grant an extension to the 30-day deadline for any unresolved violation or to allow across-the-board extensions by rule or policy for other violations or situations requiring a Tier 2 public notice. Extensions granted by the Director must be in writing.

(b) The public water system must repeat the notice every three months as long as the violation or situation persists, unless the Director determines that appropriate circumstances warrant a different repeat notice frequency. In no circumstance may the repeat notice be given less frequently than once per year. It is not appropriate for the Director to allow less frequent repeat notice for an MCL or treatment technique violation under the Total Coliform Rule or R309-211 or a treatment technique violation under the Surface Water Treatment Rule, Interim Enhanced Surface Water Treatment Rule or Filter Backwash Recycling Rule. It is also not appropriate for the Director to allow through its rules or policies across-the-board reductions in the repeat notice frequency for other ongoing violations requiring a Tier 2 repeat notice. Director determinations allowing repeat notices to be given less frequently than once every three months must be in writing.

(c) For the turbidity violations specified in this paragraph, public water systems must consult with the Director as soon as practical but no later than 24 hours after the public water system learns of the violation, to determine whether a Tier 1 public notice under R309-220-5(1) is required to protect public health. When consultation does not take place within the 24-hour period, the water system must distribute a Tier 1 notice of the violation within the next 24 hours (i.e., no later than 48 hours after the system learns of the violation), following the requirements under R309-220-5(2) and (3). Consultation with the Director is required for:

(i) Violation of the turbidity MCL under R309-200-5(5)(a); or

(ii) Violation of the SWTR, IESWTR or LT1ESWTR treatment technique requirement resulting from a single exceedance of the maximum allowable turbidity limit.

(3) Form and Manner of the Public Notice:

Public water systems must provide the initial public notice and any repeat notices in a form and manner that is reasonably calculated to reach persons served in the required time period. The form and manner of the public notice may vary based on the specific situation and type of water system, but it must at a minimum meet the following requirements:

(a) Unless directed otherwise by the Director in writing, community water systems must provide notice by:

(i) Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is

delivered by the public water system; and

(ii) Any other method reasonably calculated to reach other persons regularly served by the system, if they would not normally be reached by the notice required in paragraph (3)(a)(i) of this section. Such persons may include those who do not pay water bills or do not have service connection addresses (e.g., house renters, apartment dwellers, university students, nursing home patients, prison inmates, etc.). Other methods may include: publication in a local newspaper; delivery of multiple copies for distribution by customers that provide their drinking water to others (e.g., apartment building owners or large private employers); posting in public places served by the system or on the Internet; or delivery to community organizations.

(b) Unless directed otherwise by the Director in writing, non-community water systems must provide notice by:

(i) Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the system, or by mail or direct delivery to each customer and service connection (where known); and

(ii) Any other method reasonably calculated to reach other persons served by the system if they would not normally be reached by the notice required in paragraph (3)(b)(i) of this section. Such persons may include those served who may not see a posted notice because the posted notice is not in a location they routinely pass by. Other methods may include: publication in a local newspaper or newsletter distributed to customers; use of E-mail to notify employees or students; or, delivery of multiple copies in central locations (e.g., community centers).

R309-220-7. Tier 3 Public Notice -- Form, Manner and Frequency of Notice.

(1) Violation Categories And Other Situations Requiring a Tier 3 Public Notice:

(a) Monitoring violations under R309-205, R309-210 and R309-215, except where a Tier 1 notice is required under R309-220-5(1) or where the Director determines that a Tier 2 notice is required;

(b) Failure to comply with a testing procedure established in R309-205, R309-210 and R309-215, except where a Tier 1 notice is required under R309-220-5(1) or where the Director determines that a Tier 2 notice is required;

(c) Operation under a variance granted under R309-100-10;

(d) Availability of unregulated contaminant monitoring results, as required under R309-220-10; and

(e) Exceedance of the fluoride secondary maximum contaminant level (SMCL), as required under R309-220-11; and

(f) Reporting and Recordkeeping violations under R309-211.

(2) Frequency of the Tier 3 Public Notice:

(a) Public water systems must provide the public notice not later than one year after the public water system learns of the violation or situation or begins operating under a variance or exemption. Following the initial notice, the public water system must repeat the notice annually for as long as the violation, variance, exemption, or other situation persists. If the public notice is posted, the notice must remain in place for as long as the violation, variance, exemption, or other situation persists, but in no case less than seven days (even if the violation or situation is resolved).

(b) Instead of individual Tier 3 public notices, a public water system may use an annual report detailing all violations and situations that occurred during the previous twelve months, as long as the timing requirements of paragraph (2)(a) of this section are met.

(3) Form and Manner of the Public Notice:

Public water systems must provide the initial notice and any repeat notices in a form and manner that is reasonably calculated to reach persons served in the required time period.

The form and manner of the public notice may vary based on the specific situation and type of water system, but it must at a minimum meet the following requirements:

(a) Unless directed otherwise by the Director in writing, community water systems must provide notice by:

(i) Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the public water system; and

(ii) Any other method reasonably calculated to reach other persons regularly served by the system, if they would not normally be reached by the notice required in paragraph (3)(a)(i) of this section. Such persons may include those who do not pay water bills or do not have service connection addresses (e.g., house renters, apartment dwellers, university students, nursing home patients, prison inmates, etc.). Other methods may include: publication in a local newspaper; delivery of multiple copies for distribution by customers that provide their drinking water to others (e.g., apartment building owners or large private employers); posting in public places or on the Internet; or delivery to community organizations.

(b) Unless directed otherwise by the Director in writing, non-community water systems must provide notice by:

(i) Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the system, or by mail or direct delivery to each customer and service connection (where known); and

(ii) Any other method reasonably calculated to reach other persons served by the system, if they would not normally be reached by the notice required in paragraph (3)(b)(i) of this section. Such persons may include those who may not see a posted notice because the notice is not in a location they routinely pass by. Other methods may include: publication in a local newspaper or newsletter distributed to customers; use of E-mail to notify employees or students; or, delivery of multiple copies in central locations (e.g., community centers).

(4) Use of the Consumer Confidence Report to meet the Tier 3 public notice requirements:

For community water systems, the Consumer Confidence Report (CCR) required under R309-225 may be used as a vehicle for the initial Tier 3 public notice and all required repeat notices, as long as:

(a) The CCR is provided to persons served no later than 12 months after the system learns of the violation or situation as required under R309-220-7(2);

(b) The Tier 3 notice contained in the CCR follows the content requirements under R309-220-8; and

(c) The CCR is distributed following the delivery requirements under R309-220-7(3).

R309-220-8. Content of the Public Notice.

(1) When a public water system violates a UPDWR or has a situation requiring public notification, each public notice must include the following elements:

(a) A description of the violation or situation, including the contaminant(s) of concern, and (as applicable) the contaminant level(s);

(b) When the violation or situation occurred;

(c) Any potential adverse health effects from the violation or situation, including the standard language under paragraph (4)(a) or (4)(b) of this section, whichever is applicable;

(d) The population at risk, including subpopulations particularly vulnerable if exposed to the contaminant in their drinking water;

(e) Whether alternative water supplies should be used;

(f) What actions consumers should take, including when they should seek medical help, if known;

(g) What the system is doing to correct the violation or situation;

(h) When the water system expects to return to compliance

or resolve the situation;

(i) The name, business address, and phone number of the water system owner, operator, or designee of the public water system as a source of additional information concerning the notice; and

(j) A statement to encourage the notice recipient to distribute the public notice to other persons served, using the standard language under paragraph (4)(c) of this section, where applicable.

(2) Required elements to be included in the public notice for public water systems operating under a variance or exemption:

(a) If a public water system has been granted a variance or an exemption, the public notice must contain:

(i) An explanation of the reasons for the variance or exemption;

(ii) The date on which the variance or exemption was issued;

(iii) A brief status report on the steps the system is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance or exemption; and

(iv) A notice of any opportunity for public input in the review of the variance or exemption.

(b) If a public water system violates the conditions of a variance or exemption, the public notice must contain the ten elements listed in paragraph (1) of this section.

(3) Presentation of the public notice.

(a) Each public notice required by this section:

(i) Must be displayed in a conspicuous way when printed or posted;

(ii) Must not contain overly technical language or very small print;

(iii) Must not be formatted in a way that defeats the purpose of the notice;

(iv) Must not contain language which nullifies the purpose of the notice.

(b) Each public notice required by this section must comply with multilingual requirements, as follows:

(i) For public water systems serving a large proportion of non-English speaking consumers, as determined by the Director, the public notice must contain information in the appropriate language(s) regarding the importance of the notice or contain a telephone number or address where persons served may contact the water system to obtain a translated copy of the notice or to request assistance in the appropriate language.

(ii) In cases where the Director has not determined what constitutes a large proportion of non-English speaking consumers, the public water system must include in the public notice the same information as in paragraph (3)(b)(i) of this section, where appropriate to reach a large proportion of non-English speaking persons served by the water system.

(4) Public water systems are required to include the following standard language in their public notice:

(a) Standard health effects language for MCL or MRDL violations, treatment technique violations, and violations of the condition of a variance or exemption. Public water systems must include in each public notice the health effects language specified in R309-220-14 corresponding to each MCL, MRDL, and treatment technique violation and for each violation of a condition of a variance or exemption.

(b) Standard language for monitoring and testing procedure violations.

Public water systems must include the following language in their notice, including the language necessary to fill in the blanks, for all monitoring and testing procedure violations: "We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets

health standards. During (compliance period), we ('did not monitor or test' or 'did not complete all monitoring or testing') for (contaminant(s)), and therefore cannot be sure of the quality of your drinking water during that time."

(c) Standard language to encourage the distribution of the public notice to all persons served. Public water systems must include in their notice the following language (where applicable): "Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail."

R309-220-9. Notice to New Billing Units or New Customers.

(1) Community water systems must give a copy of the most recent public notice for any continuing violation, the existence of a variance or exemption, or other ongoing situations requiring a public notice to all new billing units or new customers prior to or at the time service begins.

(2) Non-community water systems must continuously post the public notice in conspicuous locations in order to inform new consumers of any continuing violation, variance or exemption, or other situation requiring a public notice for as long as the violation, variance, exemption, or other situation persists.

R309-220-10. Special Notice of the Availability of Unregulated Contaminant Monitoring Results.

(1) Applicability of the special notice: The owner or operator of a community water system or non-transient, non-community water system required to monitor under 40 CFR section 141.40 must notify persons served by the system of the availability of the results of such sampling no later than 12 months after the monitoring results are known.

(2) Required form and manner of the special notice: The form and manner of the public notice must follow the requirements for a Tier 3 public notice prescribed in R309-220-7(3), (4)(a), and (4)(c). The notice must also identify a person and provide the telephone number to contact for information on the monitoring results.

R309-220-11. Special Notice for Exceedance of the Secondary MCL for Fluoride.

(1) Applicability of the special notice: Community water systems that exceed the fluoride secondary maximum contaminant level (SMCL) of 2 mg/l as specified in R309-200-6 (determined by the last single sample taken in accordance with R309-205-5), but do not exceed the maximum contaminant level (MCL) of 4 mg/l for fluoride (as specified in R309-200-5), must provide the public notice in paragraph (3) of this section to persons served. Public notice must be provided as soon as practical but no later than 12 months from the day the water system learns of the exceedance. A copy of the notice must also be sent to all new billing units and new customers at the time service begins and to the State public health officer. The public water system must repeat the notice at least annually for as long as the SMCL is exceeded. If the public notice is posted, the notice must remain in place for as long as the SMCL is exceeded, but in no case less than seven days (even if the exceedance is eliminated). On a case-by-case basis, the Director may require an initial notice sooner than 12 months and repeat notices more frequently than annually.

(2) Required form and manner of the special notice: The form and manner of the public notice (including repeat notices) must follow the requirements for a Tier 3 public notice in R309-220-7(3), (4)(a), and (4)(c).

(3) Required mandatory language to be contained in the special notice: The notice must contain the following language,

including the language necessary to fill in the blanks:

This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/l) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by your community water system (name) has a fluoride concentration of (insert value) mg/l.

Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

Drinking water containing more than 4 mg/l of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 mg/l of fluoride, but we're required to notify you when we discover that the fluoride levels in your drinking water exceed 2 mg/l because of this cosmetic dental problem.

For more information, please call (name of water system contact) of (name of community water system) at (phone number). Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP.

R309-220-12. Special Notice for Nitrate Exceedances above MCL by Non-Community Water Systems (NCWS), where Granted Permission by the Director.

(1) Applicability of the special notice: The owner or operator of a non-community water system granted permission by the Director under R309-200-5(1)(c), Table 200-1, note (4)(b) to exceed the nitrate MCL must provide notice to persons served according to the requirements for a Tier 1 notice under R309-220-5 (1) and (2).

(2) Required form and manner of the special notice: Non-community water systems granted permission by the Director to exceed the nitrate MCL under R309-200-5(1)(c), Table 200-1, note (4)(b) must provide continuous posting of the fact that nitrate levels exceed 10 mg/l and the potential health effects of exposure, according to the requirements for Tier 1 notice delivery under R309-220-5(3) and the content requirements under R309-220-8.

R309-220-13. Special Notice for Repeated Failure to Conduct Monitoring of the Source Water for Cryptosporidium and for Failure to Determine Bin Classification or Mean Cryptosporidium Level.

(1) Applicability of the special notice for repeated failure to monitor: The owner or operator of a community or non-community water system that is required to monitor source water under R309-215-15(2) must notify persons served by the water system that monitoring has not been completed as specified no later than 30 days after the system has failed to collect any 3 months of monitoring as specified in R309-215-15(2)(c). The notice must be repeated as specified in R309-220-6(2).

(2) Applicability of the special notice for failure to determine bin classification: The owner or operator of a community or non-community water system that is required to determine a bin classification under R309-215-15(1) must notify persons served by the water system that the determination

has not been made as required no later than 30 days after the system has failed report the determination as specified in R309-215-15(1)(e). The notice must be repeated as specified in R309-220-6(2). The notice is not required if the system is complying with a Director-approved schedule to address the violation.

(3) Required form and manner of the special notice: The form and manner of the public notice must follow the requirements for a Tier 2 public notice prescribed in R309-220-6(3). The public notice must be presented as required in R309-220-8(3).

(4) Required mandatory language to be contained in the special notice: The notice must contain the following language, including the language necessary to fill in the blanks.

(a) The special notice for repeated failure to conduct monitoring must contain the following language: We are required to monitor the source of your drinking water for Cryptosporidium. Results of the monitoring are to be used to determine whether water treatment at the (treatment plant name) is sufficient to adequately remove Cryptosporidium from your drinking water. We are required to complete this monitoring and make this determination by (required bin determination date). We "did not monitor or test" or "did not complete all monitoring or testing on schedule" and, therefore, we may not be able to determine by the required date what treatment modifications, if any, must be made to ensure adequate Cryptosporidium removal. Missing this deadline may, in turn, jeopardize our ability to have the required treatment modifications, if any, completed by the deadline required, (date). For more information, please call (name of water system contact) of (name of water system) at (phone number).

(b) The special notice for failure to determine bin classification or mean Cryptosporidium level must contain the following language: We are required to monitor the source of your drinking water for Cryptosporidium in order to determine by (date) whether water treatment at the (treatment plant name) is sufficient to adequately remove Cryptosporidium from your drinking water. We have not made this determination by the required date. Our failure to do this may jeopardize our ability to have the required treatment modifications, if any, completed by the required deadline of (date). For more information, please call (name of water system contact) of (name of water system) at (phone number).

(c) Each special notice must also include a description of what the system is doing to correct the violation and when the system expects to return to compliance or resolve the situation.

R309-220-14. Notice by Director on behalf of the Public Water System.

(1) The Director may give the notice required by this rule on behalf of the owner and operator of the public water system if the Director complies with the requirements of this rule.

(2) The owner or operator of the public water system remains responsible for ensuring that the requirements of this rule are met.

R309-220-15. Standard Health Effects Language.

Microbiological Contaminants:

(1) Total Coliform. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

(2) Coliform Assessment and/or Corrective Action

Violation. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that are found. (THE SYSTEM MUST USE THE FOLLOWING APPLICABLE SENTENCES.) We failed to conduct the required assessment. We failed to correct all identified sanitary defects that were found during the assessment(s).

(3) E.Coli Assessment and/or Corrective Action Violations. E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We violated the standard for E. coli, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct a detailed assessment to identify problems and to correct any problems that are found. (THE SYSTEM MUST USE THE FOLLOWING APPLICABLE SENTENCES.) We failed to conduct the required assessment. We failed to correct all identified sanitary defects that were found during the assessment that we conducted.

(4) E. coli. E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.

(5) Seasonal System TT Violations. When this violation includes the failure to monitor for total coliforms or E. coli prior to serving water to the public, the mandatory language found at R309-220-8(4)(b) must be used. When this violation includes failure to complete other actions, the appropriate elements found in R309-220-8(1) to describe the violation must be used.

(6) Total organic carbon. Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

(7) Turbidity. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. Surface Water Treatment Rule (SWTR), Interim Enhanced Surface Water Treatment Rule (IESWTR), Long Term 1 Enhanced Surface Water Treatment Rule (LT1) and Filter Backwash Recycling Rule (FBR) violations.

(8) Giardia lamblia. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

(9) Viruses. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

(10) Heterotrophic plate count (HPC) bacteria.

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

(11) Legionella. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

(12) Cryptosporidium. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

(13) Fecal Indicators. Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these waste can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

Radioactive Contaminants:

(14) Alpha emitters. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

(15) Beta/photon emitters. Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.

(16) Combined Radium 226/228. Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

(17) Uranium. Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.

Inorganic Contaminants:

(18) Antimony. Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.

(19) Arsenic. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

(20) Asbestos. Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.

(21) Barium. Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

(22) Beryllium. Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.

(23) Cadmium. Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.

(24) Chromium. Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.

(25) Copper. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

(26) Cyanide. Some people who drink water containing cyanide well in excess of the MCL over many years could

experience nerve damage or problems with their thyroid.

(27) Fluoride. Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

(28) Lead. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

(29) Mercury (inorganic). Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.

(30) Nitrate. Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.

(31) Nitrite. Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.

(32) Selenium. Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.

(33) Thallium. Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.

Synthetic organic contaminants including pesticides and herbicides:

(34) 2,4-D. Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.

(35) 2,4,5-TP (Silvex). Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.

(36) Acrylamide. Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.

(37) Alachlor. Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.

(38) Atrazine. Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.

(39) Benzo(a)pyrene (PAH). Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.

(40) Carbofuran. Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.

(41) Chlordane. Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.

(42) Dalapon. Some people who drink water containing

dalapon well in excess of the MCL over many years could experience minor kidney changes.

(43) Di (2-ethylhexyl) adipate. Some people who drink water containing di (2-ethylhexyl) adipate well in excess of the MCL over many years could experience general toxic effects or reproductive difficulties.

(44) Di (2-ethylhexyl) phthalate. Some people who drink water containing di (2-ethylhexyl) phthalate in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.

(45) Dibromochloropropane (DBCP). Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.

(46) Dinoseb. Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.

(47) Dioxin (2,3,7,8-TCDD). Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.

(48) Diquat. Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.

(49) Endothall. Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.

(50) Endrin. Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.

(51) Epichlorohydrin. Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.

(52) Ethylene dibromide. Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.

(53) Glyphosate. Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.

(54) Heptachlor. Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.

(55) Heptachlor epoxide. Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.

(56) Hexachlorobenzene. Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.

(57) Hexachlorocyclopentadiene. Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.

(58) Lindane. Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.

(59) Methoxychlor. Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.

(60) Oxamyl (Vydate). Some people who drink water containing oxamyl in excess of the MCL over many years could

experience slight nervous system effects.

(61) PCBs (Polychlorinated biphenyls). Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.

(62) Pentachlorophenol. Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.

(63) Picloram. Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.

(64) Simazine. Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.

(65) Toxaphene. Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.

Volatile Organic Contaminants:

(66) Benzene. Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.

(67) Bromate. Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.

(68) Carbon Tetrachloride. Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.

(69) Chloramines. Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.

(70) Chlorine. Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.

(71) Chlorite. Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.

(72) Chlorine dioxide. Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.

(73) Chlorobenzene. Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.

(74) o-Dichlorobenzene. Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.

(75) p-Dichlorobenzene. Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.

(76) 1,2-Dichloroethane. Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.

(77) 1,1-Dichloroethylene. Some people who drink water

containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.

(78) cis-1,2-Dichloroethylene. Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.

(79) trans-1,2-Dichloroethylene. Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.

(80) Dichloromethane. Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.

(81) 1,2-Dichloropropane. Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.

(82) Ethylbenzene. Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.

(83) Haloacetic Acids (HAA). Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

(84) Styrene. Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.

(85) Tetrachloroethylene. Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.

(86) 1,2,4-Trichlorobenzene. Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.

(87) 1,1,1-Trichloroethane. Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.

(88) 1,1,2-Trichloroethane. Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.

(89) Trichloroethylene. Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.

(90) TTHMs (Total Trihalomethanes). Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

(91) Toluene. Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.

(92) Vinyl Chloride. Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.

(93) Xylenes. Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

KEY: drinking water, public notification, health effects

May 1, 2016

19-4-104

Notice of Continuation March 13, 2015

R309. Environmental Quality, Drinking Water.**R309-225. Monitoring and Water Quality: Consumer Confidence Reports.****R309-225-1. Purpose.**

This rule establishes the minimum requirements for the content of annual reports that community water systems must deliver to their customers. These reports must contain information on the quality of the water delivered by the systems and characterize the risks (if any) from exposure to contaminants detected in the drinking water in an accurate and understandable manner.

R309-225-2 Authority.

R309-225-3 Definitions.

R309-225-4 General Requirements.

R309-225-5 Content of the reports.

R309-225-6 Required additional health information.

R309-225-7 Report delivery and recordkeeping.

R309-225-8 Major Sources of Contaminants in Drinking Water.

R309-225-2. Authority.

This rule is promulgated by the Drinking Water Board as authorized by Title 19, Environmental Quality Code, Chapter 4, Safe Drinking Water Act, Subsection 104 of the Utah Code and in accordance with 63G-3 of the same, known as the Administrative Rulemaking Act.

R309-225-3. Definitions.

Definitions for certain terms used in this rule are given in R309-110 but may be further clarified herein.

(1) For the purpose of R309-225, customers are defined as billing units or service connections to which water is delivered by a community water system.

(2) For the purpose of R309-225, detected means: at or above the levels prescribed by R444-14-4(2).

R309-225-4. General Requirements.

(1) This rule applies only to community water systems.

(2) Effective dates.

(a) Each existing community water system must deliver its first report by October 19, 1999, its second report by July 1, 2000, and subsequent reports by July 1 annually thereafter. The first report must contain data collected during, or prior to, calendar year 1998 as prescribed in R309-225-5(4)(c). Each report thereafter must contain data collected during, or prior to, the previous calendar year.

(b) A new community water system must deliver its first report by July 1 of the year after its first full calendar year in operation and annually thereafter.

(c) A community water system that sells water to another community water system must deliver the applicable information required in R309-225-5 to the buyer system:

(i) no later than April 19, 1999, by April 1, 2000, and by April 1 annually thereafter or

(ii) on a date mutually agreed upon by the seller and the purchaser, and specifically included in a contract between the parties.

R309-225-5. Content of the Reports.

(1) Each community water system must provide to its customers an annual report that contains the information specified in this section and R309-225-6.

(2) Information on the source of the water delivered.

(a) Each report must identify the source(s) of the water delivered by the community water system by providing information on:

(i) The type of the water: e.g., surface water, ground water; and

(ii) The commonly used name (if any) and location of the

body (or bodies) of water.

(b) If a source water assessment has been completed, the report must notify consumers of the availability of this information and the means to obtain it. In addition, systems are encouraged to highlight in the report significant sources of contamination in the source water area if they have readily available information. Where a system has received a source water assessment from the Director, the report must include a brief summary of the system's susceptibility to potential sources of contamination, using language provided by the Director or written by the operator.

(3) Definitions.

(a) Each report must include the following definitions:

(i) Maximum Contaminant Level Goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

(ii) Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

(b) A report for a community water system operating under a variance or an exemption issued under R309-100-10 or R309-100-11 must include the following definition: Variances and Exemptions: Director or EPA permission not to meet an MCL or a treatment technique under certain conditions.

(c) A report which contains data on a contaminant that EPA regulates using any of the following terms must include the applicable definitions:

(i) Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

(ii) Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

(iii) Maximum residual disinfectant level goal or MRDLG: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

(iv) Maximum residual disinfectant level or MRDL: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

(d) After April 1, 2016, a report that contains information regarding a Level 1 or Level 2 Assessment required under R309-211 must include the applicable definitions:

(i) Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

(ii) Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

(4) Information on Detected Contaminants.

(a) This sub-section specifies the requirements for information to be included in each report for contaminants subject to mandatory monitoring (except Cryptosporidium). It applies to:

(i) Contaminants subject to an MCL, action level, maximum residual disinfectant level, or treatment technique (regulated contaminants);

(ii) Contaminants for which monitoring is required by 40 CFR section 141.40 (unregulated contaminants); and

(iii) Disinfection by-products or microbial contaminants for which monitoring is required by R309-210, R309-215 and R309-211, except as provided under paragraph (e)(1) of this section, and which are detected in the finished water.

(b) The data relating to these contaminants must be displayed in one table or in several adjacent tables. Any additional monitoring results which a community water system chooses to include in its report must be displayed separately.

(c) The data must be derived from data collected to comply with EPA and State monitoring and analytical requirements during calendar year 1998 for the first report and subsequent calendar years thereafter except that:

(i) Where a system is allowed to monitor for regulated contaminants less often than once a year, the table(s) must include the date and results of the most recent sampling and the report must include a brief statement indicating that the data presented in the report are from the most recent testing done in accordance with the regulations. No data older than 5 years need be included.

(ii) Results of monitoring in compliance with federal Information Collection Rule, (40 CFR sections 141.142 and 141.143) need only be included for 5 years from the date of last sample or until any of the detected contaminants becomes regulated and subject to routine monitoring requirements, whichever comes first.

(d) For detected regulated contaminants, the table(s) must contain:

(i) The MCL for that contaminant expressed as a number equal to or greater than 1.0;

(ii) The MCLG for that contaminant expressed in the same units as the MCL;

(iii) If there is no MCL for a detected contaminant, the table must indicate that there is a treatment technique, or specify the action level, applicable to that contaminant, and the report must include the definitions for treatment technique and/or action level, as appropriate, specified in paragraph(3)(c) of this section;

(iv) For contaminants subject to an MCL, except turbidity, total coliform, fecal coliform and E. coli, the highest contaminant level used to determine compliance with the quality standards listed in R309-200 and the range of detected levels, as follows:

(A) When compliance with the MCL is determined annually or less frequently: the highest detected level at any sampling point and the range of detected levels expressed in the same units as the MCL.

(B) When compliance with the MCL is determined by calculating a running annual average of all samples taken at a sampling point: the highest average of any of the sampling points and the range of all sampling points expressed in the same units as the MCL. For the MCLs for TTHM and HAA5 in R309-200-5(3)(c)(vi), systems must include the highest locational running annual average for TTHM and HAA5 and the range of individual sample results for all monitoring locations expressed in the same units as the MCL. If more than one location exceeds the TTHM and HAA5 MCL, the system must include the locational running annual averages for all locations that exceed the MCL.

(C) When compliance with the MCL is determined on a system-wide basis by calculating a running annual average of all samples at all monitoring locations: the average and range of detection expressed in the same units as the MCL. The system is required to include individual sample results for the IDSE conducted under R309-210-9 when determining the range of TTHM and HAA5 results to be reported in the annual consumer confidence report for the calendar year that the IDSE samples were taken.

(D) When rounding of results to determine compliance with the MCL is allowed by the rules, rounding should be done prior to converting the number in order to express it as a number equal to or greater than 1.0.

(v) For turbidity.

(A) When it is reported pursuant to R309-205-8 and R309-

215-9: the highest average monthly value.

(B) When it is reported pursuant to R309-215-9: the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits specified in R309-200-5(5)(a) and (b) for the filtration technology being used. The report should include an explanation of the reasons for measuring turbidity.

(vi) For lead and copper: the 90th percentile value of the most recent round of sampling and the number of sampling sites exceeding the action level.

(vii) Before March 31, 2016, For total coliform:

(A) The highest monthly number of positive samples for systems collecting fewer than 40 samples per month; or

(B) The highest monthly percentage of positive samples for systems collecting at least 40 samples per month.

(viii) Before March 31, 2016, For fecal coliform: the total number of positive samples.

(vii) After April 1, 2016, for E. coli analytical results under R309-211: The total number of positive samples.

(viii) The likely source(s) of detected contaminants to the best of the operator's knowledge. Specific information regarding contaminants may be available in sanitary surveys and source water assessments, and should be used when available to the operator. If the operator lacks specific information on the likely source, the report must include one or more of the typical sources for that contaminant listed in R309-225-8 that is most applicable to the system.

(e) If a community water system distributes water to its customers from multiple hydraulically independent distribution systems that are fed by different raw water sources, the table should contain a separate column for each service area and the report should identify each separate distribution system. Alternatively, systems could produce separate reports tailored to include data for each service area.

(f) The table(s) must clearly identify any data indicating violations of MCLs, MRDLs or treatment techniques and the report must contain a clear and readily understandable explanation of the violation including: the length of the violation, the potential adverse health effects, and actions taken by the system to address the violation. To describe the potential health effects, the system must use the relevant language in R309-220-15.

(g) For detected unregulated contaminants for which monitoring is required (except Cryptosporidium), the table(s) must contain the average and range at which the contaminant was detected. The report may include a brief explanation of the reasons for monitoring for unregulated contaminants.

(5) Information on Cryptosporidium, radon, and other contaminants.

(a) If the system has performed any monitoring for Cryptosporidium, including monitoring performed to satisfy the requirements of the federal Information Collection Rule (40 CFR section 141.143), which indicates that Cryptosporidium may be present in the source water or the finished water, the report must include:

(i) A summary of the results of the monitoring; and

(ii) An explanation of the significance of the results.

(b) If the system has performed any monitoring for radon which indicates that radon may be present in the finished water, the report must include:

(i) The results of the monitoring; and

(ii) An explanation of the significance of the results.

(c) If the system has performed additional monitoring which indicates the presence of other contaminants in the finished water, EPA strongly encourages systems to report any results which may indicate a health concern. To determine if results may indicate a health concern, EPA recommends that systems find out if EPA has proposed a regulation or issued a health advisory for that contaminant by calling the Safe

Drinking Water Hotline (800-426-4791). EPA considers detects above a proposed MCL or health advisory level to indicate possible health concerns. For such contaminants, EPA recommends that the report include:

- (i) The results of the monitoring; and
- (ii) An explanation of the significance of the results noting the existence of a health advisory or a proposed regulation.

(6) Compliance with UPDWR. In addition to the requirements of R309-225-5(4)(f), the report must note any violation that occurred during the year covered by the report of a requirement listed below, and include a clear and readily understandable explanation of the violation, any potential adverse health effects, and the steps the system has taken to correct the violation.

- (a) Monitoring and reporting of compliance data;
- (b) Filtration and disinfection prescribed by R309-505 of this part. For systems which have failed to install adequate filtration or disinfection equipment or processes, or have had a failure of such equipment or processes which constitutes a violation, the report must include the following language as part of the explanation of potential adverse health effects: Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

(c) Lead and copper control requirements prescribed by R309-210-6. For systems which fail to take one or more actions prescribed by R309-210-6(1)(c), R309-210-6(2), or R309-210-6(4), the report must include the applicable language in R309-220-14 for lead, copper, or both.

(d) Treatment techniques for Acrylamide and Epichlorohydrin prescribed by R309-215-8. For systems which violate the requirements of R309-215-8, the report must include the relevant language from R309-220-14.

(e) Recordkeeping of compliance data.

(f) Special monitoring requirements prescribed by 40 CFR section 141.40 (unregulated contaminants); and

(g) Violation of the terms of a variance, an exemption, or an administrative or judicial order.

(7) Variances and Exemptions. If a system is operating under the terms of a variance or an exemption issued under R309-100-10 or R309-100-11, the report must contain:

(a) An explanation of the reasons for the variance or exemption;

(b) The date on which the variance or exemption was issued;

(c) A brief status report on the steps the system is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance or exemption; and

(d) A notice of any opportunity for public input in the review, or renewal, of the variance or exemption.

(8) Additional information.

(a) The report must contain a brief explanation regarding contaminants which may reasonably be expected to be found in drinking water including bottled water. This explanation may include the language of paragraphs (8)(a)(i) through (iii) or systems may use their own comparable language. The report also must include the language of paragraph (8)(a)(iv) of this section.

(i) The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

(ii) Contaminants that may be present in source water include:

(A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

(B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

(C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

(D) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

(E) Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

(iii) In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

(iv) Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

(b) The report must include the telephone number of the owner, operator, or designee of the community water system as a source of additional information concerning the report.

(c) In communities with a large proportion of non-English speaking residents, as determined by the Director, the report must contain information in the appropriate language(s) regarding the importance of the report or contain a telephone number or address where such residents may contact the system to obtain a translated copy of the report or assistance in the appropriate language.

(d) The report must include information (e.g., time and place of regularly scheduled board meetings) about opportunities for public participation in decisions that may affect the quality of the water.

(e) The systems may include such additional information as they deem necessary for public education consistent with, and not detracting from, the purpose of the report.

(f) Systems required to comply with R309-215-16.

(i) Any ground water system that receives notice from the Director of a significant deficiency or notice from a laboratory of a fecal indicator-positive ground water source sample that is not invalidated by the Director under R309-215-16(2)(d) must inform its customers of any significant deficiency that is uncorrected at the time of the next report or of any fecal indicator-positive ground water source sample in the next report. The system must continue to inform the public annually until the Director determines that particular significant deficiency is corrected or the fecal contamination in the ground water source is addressed under R309-215-16(3)(a). Each report must include the following elements.

(A) The nature of the particular significant deficiency or the source of the fecal contamination (if the source is known) and the date the significant deficiency was identified by the Director or the dates of the fecal indicator-positive ground water source samples;

(B) If the fecal contamination in the ground water source has been addressed under R309-215-16(3)(a) and the date of such action;

(C) For each significant deficiency or fecal contamination

in the ground water source that has not been addressed under R309-215-16(3)(a), the Director-approved plan and schedule for correction, including interim measures, progress to date, and any interim measures completed; and

(D) If the system receives notice of a fecal indicator-positive ground water source sample that is not invalidated by the Director under R309-215-16(2)(d), the potential health effects using the health effects language of Appendix A of subpart O.

(ii) If directed by the Director, a system with significant deficiencies that have been corrected before the next report is issued must inform its customers of the significant deficiency, how the deficiency was corrected, and the date of correction under paragraph (8)(f)(i) of this section.

R309-225-6. Required Additional Health Information.

(1) All reports must prominently display the following language:

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

(2) A system which detects arsenic at levels above 5 micrograms per liter, but below the MCL:

(a) Must include in its report a short informational statement about arsenic, using language such as: While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

(b) May write its own educational statement, but only in consultation with the Director.

(3) A system which detects nitrate at levels above 5 mg/L, but below the MCL:

(a) Must include a short informational statement about the impacts of nitrate on children using language such as: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

(b) May write its own educational statement, but only in consultation with the Director.

(4) Every report must include the following lead-specific information:

(a) A short informational statement about lead in drinking water and its effects on children. The statement must include the following information:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. (NAME OF UTILITY) is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using

water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

(b) A system may write its own educational statement, but only in consultation with the Director.

(5) Community water systems that detect TTHM above 0.080 mg/L (milligrams per liter), but below the MCL in R309-200-5(3)(c), as an annual average, monitored and calculated under the provisions of R309-210-8, must include health effects language for TTHMs prescribed in R309-220-14.

(6) Beginning in the report due by July 1, 2002 and ending January 22, 2006, a community water system that detects arsenic above 0.01 milligrams per liter and up to and including 0.05 milligrams per liter must include the arsenic health effects language prescribed in R309-220-14.

(7) After April 1, 2016, Systems required to comply with R309-211.

(a) Any system required to comply with the Level 1 assessment requirement or a Level 2 assessment requirement that is not due to an E. coli MCL violation must include in the report the text found in paragraph (7)(a)(i) and paragraphs (7)(a)(ii) and (iii) of this section as appropriate, filling in the blanks accordingly and the text found in paragraphs (7)(a)(iv)(A) and (B) of this section if appropriate.

(i) Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

(ii) During the past year we were required to conduct (INSERT NUMBER OF LEVEL 1 ASSESSMENTS) Level 1 assessment(s). (INSERT NUMBER OF LEVEL 1 ASSESSMENTS) Level 1 assessment(s) were completed. In addition, we were required to take (INSERT NUMBER OF CORRECTIVE ACTIONS) corrective actions and we completed (INSERT NUMBER OF CORRECTIVE ACTIONS) of these actions.

(iii) During the past year (INSERT NUMBER OF LEVEL 2 ASSESSMENTS) Level 2 assessments were required to be completed for our water system. (INSERT NUMBER OF LEVEL 2 ASSESSMENTS) Level 2 assessments were completed. In addition, we were required to take (INSERT NUMBER OF CORRECTIVE ACTIONS) corrective actions and we completed (INSERT NUMBER OF CORRECTIVE ACTIONS) of these actions.

(iv) Any system that has failed to complete all the required assessments or correct all identified sanitary defects, is in violation of the treatment technique requirement and must also include one or both of the following statements, as appropriate:

(A) During the past year we failed to conduct all of the required assessment(s).

(B) During the past year we failed to correct all identified defects that were found during the assessment.

(b) Any system required to conduct a Level 2 assessment due to an E. coli MCL violation must include in the report the text found in paragraphs (7)(b)(i) and (ii) of this section, filling in the blanks accordingly and the text found in paragraphs (7)(b)(iii)(A) and (B) of this section, if appropriate.

(i) E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms.

They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We found E. coli bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

(ii) We were required to complete a Level 2 assessment because we found E. coli in our water system. In addition, we were required to take (INSERT NUMBER OF CORRECTIVE ACTIONS) corrective actions and we completed (INSERT NUMBER OF CORRECTIVE ACTIONS) of these actions.

(iii) Any system that has failed to complete the required assessment or correct all identified sanitary defects, is in violation of the treatment technique requirement and must also include one or both of the following statements, as appropriate:

(A) We failed to conduct the required assessment.

(B) We failed to correct all sanitary defects that were identified during the assessment that we conducted.

(c) If a system detects E. coli and has violated the E. coli MCL, in addition to completing the table as required in R309-225-5(4)(d), the system must include one or more of the following statements to describe any noncompliance, as applicable:

(i) We had an E. coli-positive repeat sample following a total coliform-positive routine sample.

(ii) We had a total coliform-positive repeat sample following an E. coli-positive routine sample.

(iii) We failed to take all required repeat samples following an E. coli-positive routine sample.

(iv) We failed to test for E. coli when any repeat sample tests positive for total coliform.

(d) If a system detects E. coli and has not violated the E. coli MCL, in addition to completing the table as required in R309-225-5(4)(d), the system may include a statement that explains that although they have detected E. coli, they are not in violation of the E. coli MCL.

R309-225-7. Report Delivery and Recordkeeping.

(1) Except as provided in paragraph (7) of this section, each community water system must mail or otherwise directly deliver one copy of the report to each customer.

(2) The system must make a good faith effort to reach consumers who do not get water bills, using means recommended by the Director. EPA expects that an adequate good faith effort will be tailored to the consumers who are served by the system but are not bill-paying customers, such as renters or workers. A good faith effort to reach consumers would include a mix of methods appropriate to the particular system such as: Posting the reports on the Internet; mailing to postal patrons in metropolitan areas; advertising the availability of the report in the news media; publication in a local newspaper; posting in public places such as cafeterias or lunch rooms of public buildings; delivery of multiple copies for distribution by single-biller customers such as apartment buildings or large private employers; delivery to community organizations.

(3) No later than the date the system is required to distribute the report to its customers, each community water system must mail a copy of the report to the Director, followed within 3 months by a certification that the report has been distributed to customers, and that the information is correct and consistent with the compliance monitoring data previously submitted to the Director.

(4) No later than the date the system is required to distribute the report to its customers, each community water system must deliver the report to any other agency or clearinghouse identified by the Director.

(5) Each community water system must make its reports

available to the public upon request.

(6) Each community water system serving 100,000 or more persons must post its current year's report to a publicly-accessible site on the Internet.

(7) The Governor has waived the requirement of paragraph (a) of this section for community water systems serving fewer than 10,000 persons.

(a) Such systems must:

(i) Publish the reports in one or more local newspapers serving the area in which the system is located;

(ii) Inform the customers that the reports will not be mailed, either in the newspapers in which the reports are published or by other means approved by the Director; and

(iii) Make the reports available to the public upon request.

(b) Systems serving 500 or fewer persons may forego the requirements of paragraphs (7)(a)(i) and (ii) of this section if they provide notice at least once per year to their customers by mail, door-to-door delivery or by posting in an appropriate location that the report is available upon request.

(8) Any system subject to this rule must retain copies of its consumer confidence report for no less than 3 years.

R309-225-8. Major Sources of Contaminants in Drinking Water.

Microbiological Contaminants

(1) Total Coliform Bacteria - Naturally present in the environment.

(2) E. coli - Human and animal fecal waste.

(3) Fecal Indicators (enterococci or coliphage) - Human and animal fecal waste.

(4) Turbidity- Soil runoff.

(5) Total organic carbon - Naturally present in the environment.

Radioactive Contaminants

(6) Alpha emitters (pCi/l) - Erosion of natural deposits.

(7) Beta/photon emitters (mrem/yr) - Decay of natural and man-made deposits.

(8) Combined radium (pCi/l) - Erosion of natural deposits.

(9) Uranium (ug/l) - Erosion of natural deposits.

Inorganic Contaminants

(10) Antimony (ppb) - Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.

(11) Arsenic (ppb) - Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.

(12) Asbestos (MFL) - Decay of asbestos cement water mains; Erosion of natural deposits.

(13) Barium (ppm) - Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.

(14) Beryllium (ppb) - Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries.

(15) Cadmium (ppb) - Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; runoff from waste batteries and paints.

(16) Chromium (ppb) - Discharge from steel and pulp mills; Erosion of natural deposits.

(17) Copper (ppm) - Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.

(18) Cyanide (ppb) - Discharge from steel/metal factories; Discharge from plastic and fertilizer factories.

(19) Fluoride (ppm) - Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.

(20) Lead (ppb) - Corrosion of household plumbing systems; Erosion of natural deposits.

(21) Mercury (inorganic) (ppb) - Erosion of natural deposits; Discharge from refineries and factories; Runoff from

landfills; Runoff from cropland.

(22) Nitrate (as Nitrogen) (ppm) - Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

(23) Nitrite (as Nitrogen) (ppm) - Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

(24) Selenium (ppb) - Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

(25) Thallium (ppb) - Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories. Synthetic Organic Contaminants including Pesticides and Herbicides

(26) 2,4-D (ppb) - Runoff from herbicide used on row crops.

(27) 2,4,5-TP (Silvex)(ppb) - Residue of banned herbicide.

(28) Acrylamide - Added to water during sewage/wastewater treatment.

(29) Alachlor (ppb) - Runoff from herbicide used on row crops.

(30) Atrazine (ppb) - Runoff from herbicide used on row crops.

(31) Benzo(a)pyrene (PAH) (nanograms/l) -Leaching from linings of water storage tanks and distribution lines.

(32) Carbofuran (ppb) - Leaching of soil fumigant used on rice and alfalfa.

(33) Chlordane (ppb) - Residue of banned termiticide.

(34) Dalapon (ppb) - Runoff from herbicide used on rights of way.

(35) Di(2-ethylhexyl) adipate (ppb) - Discharge from chemical factories.

(36) Di(2-ethylhexyl) phthalate (ppb) - Discharge from rubber and chemical factories.

(37) Dibromochloropropane (ppt) - Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.

(38) Dinoseb (ppb) - Runoff from herbicide used on soybeans and vegetables.

(39) Diquat (ppb) - Runoff from herbicide use.

(40) Dioxin (2,3,7,8-TCDD) (ppq) - Emissions from waste incineration and other combustion; Discharge from chemical factories.

(41) Endothall (ppb) - Runoff from herbicide use.

(42) Endrin (ppb) - Residue of banned insecticide.

(43) Epichlorohydrin - Discharge from industrial chemical factories; An impurity of some water treatment chemicals.

(44) Ethylene dibromide (ppt) - Discharge from petroleum refineries.

(45) Glyphosate (ppb) - Runoff from herbicide use.

(46) Heptachlor (ppt) - Residue of banned pesticide.

(47) Heptachlor epoxide (ppt) - Breakdown of heptachlor.

(48) Hexachlorobenzene (ppb) - Discharge from metal refineries and agricultural chemical factories.

(49) Hexachlorocyclopentadiene (ppb) - Discharge from chemical factories.

(50) Lindane (ppt) - Runoff/leaching from insecticide used on cattle, lumber, gardens.

(51) Methoxychlor (ppb) - Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock.

(52) Oxamyl (Vydate)(ppb) - Runoff/leaching from insecticide used on apples, potatoes and tomatoes.

(53) PCBs (Polychlorinated biphenyls) (ppt) - Runoff from landfills; Discharge of waste chemicals.

(54) Pentachlorophenol (ppb) - Discharge from wood preserving factories.

(55) Picloram (ppb) - Herbicide runoff.

(56) Simazine (ppb) - Herbicide runoff.

(57) Toxaphene (ppb) - Runoff/leaching from insecticide used on cotton and cattle. Volatile Organic Contaminants

(58) Benzene (ppb) - Discharge from factories; Leaching

from gas storage tanks and landfills.

(59) Bromate (ppb) - By-product of drinking water chlorination.

(60) Carbon tetrachloride (ppb) - Discharge from chemical plants and other industrial activities.

(61) Chloramines (ppm) - Water additive used to control microbes.

(62) Chlorine (ppm) - Water additive used to control microbes.

(63) Chlorite (ppm) - By-product of drinking water chlorination.

(64) Chlorine dioxide (ppb) - Water additive used to control microbes.

(65) Chlorobenzene (ppb) - Discharge from chemical and agricultural chemical factories.

(66) o-Dichlorobenzene (ppb) - Discharge from industrial chemical factories.

(67) p-Dichlorobenzene (ppb) - Discharge from industrial chemical factories.

(68) 1,2-Dichloroethane (ppb) - Discharge from industrial chemical factories.

(69) 1,1-Dichloroethylene (ppb) - Discharge from industrial chemical factories.

(70) cis-1,2-Dichloroethylene (ppb) - Discharge from industrial chemical factories.

(71) trans-1,2-Dichloroethylene (ppb) - Discharge from industrial chemical factories.

(72) Dichloromethane (ppb) - Discharge from pharmaceutical and chemical factories.

(73) 1,2-Dichloropropane (ppb) - Discharge from industrial chemical factories.

(74) Ethylbenzene (ppb) - Discharge from petroleum refineries.

(75) Haloacetic Acids (HAA) (ppb) - By-product of drinking water disinfection.

(76) Styrene (ppb)- Discharge from rubber and plastic factories; Leaching from landfills.

(77) Tetrachloroethylene (ppb) - Discharge from factories and dry cleaners.

(78) 1,2,4-Trichlorobenzene (ppb) - Discharge from textile-finishing factories.

(79) 1,1,1-Trichloroethane (ppb) - Discharge from metal degreasing sites and other factories.

(80) 1,1,2-Trichloroethane (ppb) - Discharge from industrial chemical factories.

(81) Trichloroethylene (ppb) - Discharge from metal degreasing sites and other factories.

(82) TTHMs (Total trihalomethanes)(ppb) -By-product of drinking water chlorination.

(83) Toluene (ppm) - Discharge from petroleum factories.

(84) Vinyl Chloride (ppb) - Leaching from PVC piping; Discharge from plastics factories.

(85) Xylenes (ppm) - Discharge from petroleum factories; Discharge from chemical factories.

KEY: drinking water, consumer confidence report, water quality

May 1, 2016

19-4-104

Notice of Continuation March 13, 2015

R315. Environmental Quality, Waste Management and Radiation Control, Waste Management.**R315-103. Commercial Hazardous Waste Facility Siting Criteria.****R315-103-1. Commercial Hazardous Waste Facility Siting Criteria - Authority.**

Subsection 19-6-105(3) requires that criteria for siting commercial hazardous waste treatment, storage, and disposal facilities be established.

R315-103-2. Commercial Hazardous Waste Facility Siting Criteria - Applicability.

Rule R315-103 applies to all permit applications for commercial hazardous waste treatment, storage, and disposal facilities.

R315-103-3. Commercial Hazardous Waste Facility Siting Criteria - Land Use Compatibility and Location.

(a) Siting of commercial hazardous waste treatment, storage, and disposal facilities, including commercial hazardous waste incinerators, is prohibited within:

(1) national, state, and county parks, monuments, and recreation areas; designated wilderness and wilderness study areas; wild and scenic river areas;

(2) ecologically and scientifically significant natural areas, including but not limited to, wildlife management areas and habitat for listed or proposed endangered species as designated pursuant to the Endangered Species Act of 1982;

(3) 100 year floodplains, unless, for non-land based facilities only, the conditions found in subsection R315-264-18 are met to the satisfaction of the Director;

(4) 200 ft. of Holocene faults;

(5) underground mines, salt domes and salt beds;

(6) dam failure flood areas;

(7) areas likely to be impacted by landslide, mudflow, or other earth movement;

(8) farmlands classified or evaluated as "prime," "unique," or of "statewide importance" by the U.S. Department of Agriculture Soil Conservation Service under the Prime Farmland Protection Act;

(9) areas above aquifers containing ground water which has a total dissolved solids (TDS) content of less than 500 mg/l and which does not exceed applicable ground water quality standards for any contaminant. Land disposal facilities are also prohibited above aquifers containing ground water which has a TDS content of less than 3000 mg/l and which does not exceed applicable ground water quality standards for any contaminant. Non-land-based facilities above aquifers containing ground water which has a TDS content of 500 to 3000 mg/l and all facilities above aquifers containing ground water which has a TDS content between 3000 and 10,000 mg/l are permitted only where the depth to ground water is greater than 100 ft. The applicant for the proposed facility shall make the demonstration of ground water quality necessary to determine the appropriate aquifer classification;

(10) recharge zones of aquifers containing ground water which has a TDS content of less than 3000 mg/l. Land disposal facilities are also prohibited in recharge zones of aquifers containing ground water which has a TDS content of less than 10,000 mg/l;

(11) designated drinking water source protection areas or, if no source protection area is designated, a distance to existing drinking water wells and watersheds for public water supplies of one year ground water travel time plus 1000 feet for non-land-based facilities and five years ground water travel time plus 1000 feet for land disposal facilities. This requirement does not include on-site facility operation wells. The applicant for the proposed facility shall make the demonstration, acceptable to the Director, of hydraulic conductivity and other information

necessary to determine the one or five year ground water travel distance as applicable. The facility operator may be required to conduct vadose zone or other near surface monitoring if determined to be necessary and appropriate by the Director;

(12) five miles of existing permanent dwellings, residential areas, and other incompatible structures including, but not limited to, schools, churches, and historic structures;

(13) five miles of surface waters including intermittent streams, perennial streams, rivers, lakes, reservoirs, estuaries, and wetlands; and

(14) 1000 ft. of archeological sites to which adverse impacts cannot reasonably be mitigated.

R315-103-4. Commercial Hazardous Waste Facility Siting Criteria - Emergency Response and Transportation Safety.

(a) An assessment of the availability and adequacy of emergency services, including medical and fire response, shall be included in the permit application. The application shall also contain evidence that emergency response plans have been coordinated with local and regional emergency response personnel. The permit may be delayed or denied if these services are deemed inadequate.

(b) Trained emergency response personnel and equipment are to be retained by the facility and be capable of responding to emergencies both at the site and involving wastes being transported to and from the facility within the state. Details of the proposed emergency response capability shall be given in the permit application and shall be stipulated in the permit.

(c) Proposed routes of transport within the state shall be specified in the permit application. No hazardous waste shall be transported on roads where weight restrictions for the road or any bridge on the road will be exceeded in the selected route of travel. Prime consideration in the selection of routes shall be given to roads which bypass population centers. Route selection should consider residential and non-residential populations along the route; the width, condition, and types of roads used; roadside development along the route; seasonal and climatic factors; alternate emergency access to the facility site; the type, size, and configuration of vehicles expected to be hauling to the site; transportation restrictions along the proposed routes; and the transportation means and routes available to evacuate the population at risk in the event of a major accident, including spills and fires.

R315-103-5. Commercial Hazardous Waste Facility Siting Criteria - Exemptions.

Exemptions from the criteria of this section may be granted upon application on a case by case basis by the Waste Management and Radiation Control Board after an appropriate public comment period and when the Board determines that there will be no adverse impacts to public health or the environment. The Board cannot grant exemptions which would conflict with applicable regulations and restrictions of other regulatory authorities.

R315-103-6. Commercial Hazardous Waste Facility Siting Criteria - Completeness of Application.

The permit application shall not be considered complete until the applicant demonstrates compliance with the criteria given herein.

R315-103-7. Commercial Hazardous Waste Facility Siting Criteria - Siting Authority.

It is recognized that Titles 10 and 17 of the Utah Code give cities and counties authority for local land use planning and zoning. Nothing in these rules precludes cities and counties from establishing additional requirements as provided by applicable state and federal law.

KEY: hazardous waste, commercial facility siting
April 15, 2016

19-6-105(3)

R315. Environmental Quality, Waste Management and Radiation Control, Waste Management.

R315-124. Procedures for Decisionmaking.

R315-124-1. Procedures for Decisionmaking -- Applicability.

Unless otherwise stated in Rules R315-17, 101, 102, 260 through 266, 268, 270, or 273, Rule R315-124 applies to all actions by the Director taken under the rules listed above.

R315-124-3. Procedures for Decisionmaking -- Application for a Permit.

(a)(1) Any person who requires a permit, for a hazardous waste treatment, storage or disposal facility under Section 19-6-108 shall complete, sign, and submit to the Director an application for each permit required under Section R315-270-1. Applications are not required for permits by rule, Section R315-270-60.

(2) The Director is not required to begin the processing of a permit until the applicant has fully complied with the application requirements for that permit. See Sections R315-270-10, and 13.

(3) Permit applications shall comply with the signature and certification requirements of Section R315-270-11.

(b) Reserved

(c) The Director shall review for completeness every application for a permit. Upon completing the review, the Director shall notify the applicant in writing whether the application is complete. If the application is incomplete, the Director shall list the information necessary to make the application complete. When the application is for an existing facility, the Director shall specify in the notice of deficiency a date for submitting the necessary information. The Director shall notify the applicant that the application is complete upon receiving this information. After the application is completed, the Director may request additional information from an applicant to clarify, modify, or supplement previously submitted material. Requests for such additional information will not render an application incomplete.

(d) If an applicant fails or refuses to correct deficiencies in the application, the permit may be denied and appropriate enforcement actions may be taken under applicable provisions of the Utah Solid and Hazardous Waste Act.

(e) If the Director decides that a site visit is necessary for any reason in conjunction with the processing of an application, the Director shall notify the applicant and a date shall be scheduled.

(f) The effective date of an application is the date on which the Director notifies the applicant that the application is complete as provided in Subsection R315-124-3(c).

(g) For each permit application, the Director shall, no later than the effective date of the application, prepare and mail to the applicant a schedule that specifies target dates by which the Director intends to:

- (1) Prepare a draft permit;
- (2) Give public notice;
- (3) Complete the public comment period, including any public hearing; and
- (4) Issue a final permit.

R315-124-5. Procedures for Decisionmaking -- Modification, Revocation and Reissuance, or Termination of Permits.

(a) Permits may be modified, revoked and reissued, or terminated either at the request of any interested person, including the permittee, or upon the Director's initiative. However, permits may only be modified, revoked and reissued, or terminated for the reasons specified in Sections R315-270-41 or 43. All requests shall be in writing and shall contain facts or reasons supporting the request.

(b) If the Director decides the request is not justified, the Director shall send the requester a brief written response giving

a reason for the decision. Denials of requests for modification, revocation and reissuance, or termination are not subject to public notice, comment, or hearings. Denials by the Director may be appealed by following the requirements of Sections R305-7-201 through 217.

(c)(1) If the Director tentatively decides to modify or revoke and reissue a permit under Section R315-270-41, other than Subsection R315-270-42(c), the Director shall prepare a draft permit under Section R315-124-6 incorporating the proposed changes. The Director may request additional information and, in the case of a modified permit, may require the submission of an updated application. In the case of revoked and reissued permits the Director shall require the submission of a new application.

(2) In a permit modification under Section R315-124-5, only those conditions to be modified shall be reopened when a draft permit is prepared. All other aspects of the existing permit shall remain in effect. When a permit is revoked and reissued under Section R315-124-5, the entire permit is reopened just as if the permit had expired and were being reissued. During any revocation and reissuance proceeding the permittee shall comply with all conditions of the existing permit until a new final permit is reissued.

(3) Classes 1 and 2 modifications as defined in Subsections R315-270-42(a) and (b) are not subject to the requirements of Section R315-124-5.

(d) If the Director tentatively decides to terminate a permit under Section R315-270-43 the Director shall issue a notice of intent to terminate. A notice of intent to terminate is a type of draft permit which follows the same procedures as any draft permit prepared under Section R315-124-6.

(e) All draft permits, including notices of intent to terminate, prepared under Section R315-124-5 shall be based on the administrative record as defined in Section R315-124-9.

R315-124-6. Procedures for Decisionmaking -- Draft Permits.

(a) Once an application is complete, the Director shall tentatively decide whether to prepare a draft permit or to deny the application.

(b) If the Director tentatively decides to deny the permit application, the Director shall issue a notice of intent to deny. A notice of intent to deny the permit application is a type of draft permit which follows the same procedures as any draft permit prepared under Section R315-124-6. If the Director's final decision is that the tentative decision to deny the permit application was incorrect, the Director shall withdraw the notice of intent to deny and prepare a draft permit under Subsection R315-124-6(d).

(c) Reserved

(d) If the Director decides to prepare a draft permit, the Director shall prepare a draft permit that contains the following information:

- (1) All conditions under Sections R315-270-30 and 32;
- (2) All compliance schedules under Section R315-270-33;
- (3) All monitoring requirements under Section R315-270-31;

(4) All information required for permits issued under Rules R315-15, 17, and R315-301 through 320; and

(5) Standards for treatment, storage, and/or disposal and other permit conditions under Section R315-270-30;

(e) All draft permits prepared by the Director under Section R315-124-6 shall be accompanied by a statement of basis or fact sheet, and shall be based on the administrative record, publicly noticed and made available for public comment. The Director shall give notice of opportunity for a public hearing, issue a final decision, and respond to comments.

R315-124-7. Procedures for Decisionmaking -- Statement of

Basis.

The Director shall prepare a statement of basis for every draft permit for which a fact sheet under Section R315-124-8 is not prepared. The statement of basis shall briefly describe the conditions of the draft permit and the reasons for them or, in the case of notices of intent to deny or terminate, reasons supporting the tentative decision. The statement of basis shall be sent to the applicant and, on request, to any other person.

R315-124-8. Procedures for Decisionmaking -- Fact Sheet.

(a) A fact sheet shall be prepared for every draft permit where a statement of basis is not prepared. The fact sheet shall briefly set forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit. The Director shall send this fact sheet to the applicant and, on request, to any other person.

(b) The fact sheet shall include, when applicable:

(1) A brief description of the type of facility or activity which is the subject of the draft permit;

(2) The type and quantity of wastes, fluids, or pollutants which are proposed to be or are being treated, stored, disposed of, injected, emitted, or discharged.

(3) Reserved

(4) A brief summary of the basis for the draft permit conditions, including references to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record required by Section R315-124-9;

(5) Reasons why any requested variances or alternatives to required standards were granted or denied;

(6) A description of the procedures for reaching a final decision on the draft permit including:

(i) The beginning and ending dates of the comment period under Section R315-124-10 and the address where comments will be received;

(ii) Procedures for requesting a hearing and the nature of that hearing; and

(iii) Any other procedures by which the public may participate in the final decision.

(7) Name and telephone number of a person to contact for additional information.

R315-124-9. Procedures for Decisionmaking -- Administrative Record for Draft Permits.

(a) The provisions of a draft permit prepared by the Director under Section R315-124-6 shall be based on the administrative record defined in Section R305-7-209 and Section R315-124-18.

(b) Section R315-124-9 applies to all draft permits when public notice was given after the effective date of Rule R315-124.

R315-124-10. Procedures for Decisionmaking -- Public Notice of Permit Actions and Public Comment Period.

(a) Scope.

(1) The Director shall give public notice that the following actions have occurred:

(i) A permit application has been tentatively denied under Subsection R315-124-6(b); or

(ii) A draft permit has been prepared under Subsection R315-124-6(d); or

(iii) A hearing has been scheduled under Section R315-124-12;

(2) No public notice is required when a request for permit modification, revocation and reissuance, or termination is denied under Subsection R315-124-5(b). Written notice of that denial shall be given to the requester and to the permittee.

(3) Public notices may describe more than one permit or permit actions.

(b) Timing.

(1) Public notice of the preparation of a draft permit, including a notice of intent to deny a permit application, required under Subsection R315-124-10(a) shall allow at least 45 days for public comment.

(2) Public notice of a public hearing shall be given at least 30 days before the hearing. Public notice of the hearing may be given at the same time as public notice of the draft permit and the two notices may be combined.

(c) Methods. Public notice of activities described in Subsection R315-124-10(a)(1) shall be given by the following methods:

(1) By mailing or electronic mailing a copy of a notice to the following persons:

(i) The applicant;

(ii) Any other agency which the Director knows has issued or is required to issue a permit for the same facility or activity including EPA;

(iii) Federal and State agencies with jurisdiction over fish, shellfish, and wildlife resources, State Historic Preservation Officers, including any affected States, and Indian Tribes.

(iv) through (viii) Reserved

(ix) Persons on a mailing list developed by:

(A) Including those who request in writing to be on the list;

(B) Soliciting persons for "area lists" from participants in past permit proceedings in that area; and

(C) Notifying the public of the opportunity to be put on the mailing list through periodic publication in the public press and in such publications as Regional and State funded newsletters, environmental bulletins, State law journals, or through the Department web page. The Director may update the mailing list from time to time by requesting written indication of continued interest from those listed. The Director may delete from the list the name of any person who fails to respond to such a request.

(x)(A) To any unit of local government having jurisdiction over the area where the facility is proposed to be located; and

(B) To each State agency having any authority under State law with respect to the construction or operation of such facility.

(2)(i) Reserved

(ii) Publication of a notice in a daily or weekly major local newspaper of general circulation and broadcast over local radio stations.

(3) In a manner constituting legal notice to the public under State law; and

(4) Any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other forum or medium to elicit public participation.

(5) Any person otherwise entitled to receive notice under Subsection R315-124-10(c) may waive his or her rights to receive notice for any classes and categories of permits.

(d) Contents.

(1) All public notices issued under Rule R315-124 shall contain the following minimum information:

(i) Division of Waste Management and Radiation Control, P.O. Box 144880, Salt Lake City, Utah 84114-4880;

(ii) Name and address of the permittee or permit applicant and, if different, of the facility or activity regulated by the permit;

(iii) A brief description of the business conducted at the facility or activity described in the permit application or the draft permit;

(iv) Name, address and telephone number of a person from whom interested persons may obtain further information, including copies of the draft permit, statement of basis or fact sheet, and the application; and

(v) A brief description of the comment procedures required by Sections R315-124-11 and 12 and the time and

place of any hearing that will be held, including a statement of procedures to request a hearing, unless a hearing has already been scheduled, and other procedures by which the public may participate in the final permit decision.

(vi) through (ix) Reserved

(x) Any additional information considered necessary or proper.

(2) Public notices for hearings. In addition to the general public notice described in Subsection R315-124-10(d)(1), the public notice of a hearing under Section R315-124-12 shall contain the following information:

(i) Reference to the date of previous public notices relating to the permit;

(ii) Date, time, and place of the hearing; and

(iii) A brief description of the nature and purpose of the hearing, including the applicable rules and procedures.

(e) In addition to the general public notice described in Subsection R315-124-10(d)(1), all persons identified in Subsections R315-124-10(c)(1) (i), (ii), and (iii) shall be mailed or provided electronically a copy of the fact sheet or statement of basis.

R315-124-11. Procedures for Decisionmaking -- Public Comments and Requests for Public Hearings.

During the public comment period provided under Section R315-124-10, any interested person may submit written comments on the draft permit and may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. All comments shall be considered in making the final decision and shall be answered as provided in Section R315-124-17.

R315-124-12. Procedures for Decisionmaking -- Public Hearings.

(a)(1) The Director shall hold a public hearing whenever the Director finds, on the basis of requests, a significant degree of public interest in a draft permit(s);

(2) The Director may also hold a public hearing at the Director's discretion, whenever, for instance, such a hearing might clarify one or more issues involved in the permit decision;

(3)(i) the Director shall hold a public hearing whenever the Director receives written notice of opposition to a draft permit and a request for a hearing within 45 days of public notice under Subsection R315-124-10(b)(1);

(ii) whenever possible the Director shall schedule a hearing under Section R315-124-12 at a location convenient to the nearest population center to the proposed facility;

(4) Public notice of the hearing shall be given as specified in Section R315-124-10.

(b) Whenever a public hearing will be held, the Director shall designate a Presiding Officer for the hearing who shall be responsible for its scheduling and orderly conduct.

(c) Any person may submit oral or written statements and data concerning the draft permit. Reasonable limits may be set upon the time allowed for oral statements, and the submission of statements in writing may be required. The public comment period under Section R315-124-10 shall automatically be extended to the close of any public hearing under Section R315-124-12. The hearing officer may also extend the comment period by so stating at the hearing.

(d) An electronic recording or written transcript of the hearing shall be made available to the public.

R315-124-13. Procedures for Decisionmaking -- Obligation to Raise Issues and Provide Information During the Public Comment Period.

All persons, including applicants, who believe any condition of a draft permit is inappropriate or that the Director's

tentative decision to deny an application, terminate a permit, or prepare a draft permit is inappropriate, shall raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period, including any public hearing, under Section R315-124-10. Any supporting materials which are submitted shall be included in full and may not be incorporated by reference, unless they are already part of the administrative record in the same proceeding, or consist of State or Federal statutes and regulations, EPA or Division documents of general applicability, or other generally available reference materials. Commenters shall make supporting materials not already included in the administrative record available to the Director as directed by the Director and consistent with Section R305-7-209. A comment period longer than 45 days may be necessary to give commenters a reasonable opportunity to comply with the requirements of Section R315-124-13. Additional time shall be granted under Section R315-124-10 to the extent that a commenter who requests additional time demonstrates the need for such time.

R315-124-15. Procedures for Decisionmaking -- Issuance and Effective Date of Permit.

(a) After the close of the public comment period under Section R315-124-10 on a draft permit, the Director shall issue a final permit decision, or a decision to deny a permit for the active life of a hazardous waste management facility or unit under Section R315-270-29. The Director shall notify the applicant and each person who has submitted written comments or requested notice of the final permit decision. This notice shall include reference to the procedures for appealing a decision on a hazardous waste permit or a decision to terminate a hazardous waste permit. For the purposes of Section R315-124-15, a final permit decision means a final decision to issue, deny, modify, revoke and reissue, or terminate a permit.

(b) A final permit decision, or a decision to deny a permit for the active life of a hazardous waste management facility or unit under Section R315-270-29, shall become effective upon issuance, unless:

(1) A later effective date is specified in the decision; or

(2) Review is requested on the permit under Rule R305-7 and a stay is granted under Subsection 19-1-301.5(16).

R315-124-16. Procedures for Decisionmaking -- Stays of Contested Permit Conditions.

The provisions covering appeals and stays are found in Rule R305-7 and Subsection 19-1-301.5(16).

R315-124-17. Procedures for Decisionmaking -- Response to Comments.

(a) At the time that any final permit decision is issued under Section R315-124-15, the Director shall issue a response to comments. This response shall:

(1) Specify which provisions, if any, of the draft permit have been changed in the final permit decision, and the reasons for the change; and

(2) Briefly describe and respond to all significant comments on the draft permit or the permit application raised during the public comment period, or during any hearing.

(b) Any documents cited in the response to comments shall be included in the administrative record for the final permit decision as defined in Section R315-124-18. If new points are raised or new material supplied during the public comment period, the Director may document the response to those matters by adding new materials to the administrative record.

R315-124-18. Procedures for Decisionmaking -- Administrative Record for Final Permit.

(a) The Director shall base final permit decisions under

Section R315-124-15 on the administrative record defined in Section R315-124-18.

(b) The administrative record for any final permit shall consist of the administrative record for the draft permit and:

(1) All comments received during the public comment period provided under Section R315-124-10;

(2) The recording or transcript of any hearing(s) held under Section R315-124-12;

(3) Any written materials submitted at such a hearing;

(4) The response to comments required by Section R315-124-17 and any new material placed in the record under that section;

(5) Reserved;

(6) Other documents contained in the supporting file for the permit; and

(7) The final permit.

(c) The additional documents required under Subsection R315-124-18(b) should be added to the record as soon as possible after their receipt or publication by the Division. The record shall be complete on the date the final permit is issued.

(d) Section R315-124-18 applies to all final permits when the draft permit was subject to the administrative record requirements of Section R315-124-9.

(e) Material readily available at the Division Office, or published materials which are generally available and which are included in the administrative record under the standards of Section R315-124-18 or 17, need not be physically included in the same file as the rest of the record as long as it is specifically referred to in the statement of basis or fact sheet or in the response to comments.

R315-124-19. Procedures for Decisionmaking -- Appeal of Permits.

(a) Petitioning for review of a permit decision.

(1) Initiating an appeal. Appeal from a final permit decision issued under Section R315-124-15, or a decision to deny a permit for the active life of a hazardous waste management facility or unit under Section R315-270-29 is commenced by filing a Request for Agency Action as described in Rule R305-7.

R315-124-20. Procedures for Decisionmaking -- Computation of Time.

(a) Any time period scheduled to begin on the occurrence of an act or event shall begin on the day after the act or event.

(b) Any time period scheduled to begin before the occurrence of an act or event shall be computed so that the period ends on the day before the act or event.

(c) If the final day of any time period falls on a weekend or legal holiday, the time period shall be extended to the next working day.

(d) Whenever a party or interested person has the right or is required to act within a prescribed period after the service of notice or other paper upon him or her by mail, 3 days shall be added to the prescribed time.

R315-124-31. Procedures for Decisionmaking -- Pre-Application Public Meeting and Notice.

(a) Applicability. The requirements of Section R315-124-31 shall apply to all part B applications seeking initial permits for hazardous waste management units. The requirements of Section R315-124-31 shall also apply to part B applications seeking renewal of permits for such units, where the renewal application is proposing a significant change in facility operations. For the purposes of Section R315-124-31, a "significant change" is any change that would qualify as a class 3 permit modification under Section R315-270-42. The requirements of Section R315-124-31 do not apply to permit modifications under Section R315-270-42 or to applications that

are submitted for the sole purpose of conducting post-closure activities or post-closure activities and corrective action at a facility.

(b) Prior to the submission of a part B permit application for a facility, the applicant shall hold at least one meeting with the public in order to solicit questions from the community and inform the community of proposed hazardous waste management activities. The applicant shall post a sign-in sheet or otherwise provide a voluntary opportunity for attendees to provide their names and addresses.

(c) The applicant shall submit a summary of the meeting, along with the list of attendees and their addresses developed under Subsection R315-124-31(b), and copies of any written comments or materials submitted at the meeting, to the Director as a part of the part B application, in accordance with Subsection R315-270-14(b).

(d) The applicant shall provide public notice of the pre-application meeting at least 30 days prior to the meeting. The applicant shall maintain, and provide to the Director upon request, documentation of the notice.

(1) The applicant shall provide public notice in all of the following forms:

(i) A newspaper notice. The applicant shall publish a notice, fulfilling the requirements in Subsection R315-124-31(d)(2), in a newspaper of general circulation in the county or equivalent jurisdiction that hosts the proposed location of the facility. In addition, the Director shall instruct the applicant to publish the notice in newspapers of general circulation in adjacent counties or equivalent jurisdictions, where the Director determines that such publication is necessary to inform the affected public.

(ii) A visible and accessible sign. The applicant shall post a notice on a clearly marked sign at or near the facility, fulfilling the requirements in Subsection R315-124-31(d)(2). If the applicant places the sign on the facility property, then the sign shall be large enough to be readable from the nearest point where the public would pass by the site.

(iii) A broadcast media announcement. The applicant shall broadcast a notice, fulfilling the requirements in Subsection R315-124-31(d)(2), at least once on at least one local radio station or television station. The applicant may employ another medium with prior approval of the Director.

(iv) A notice to the permitting agency. The applicant shall send a copy of the newspaper notice to the Director and to the appropriate local government, in accordance with Subsection R315-124-10(c)(1)(x).

(2) The notices required under Subsection R315-124-31(d)(1) shall include:

(i) The date, time, and location of the meeting;

(ii) A brief description of the purpose of the meeting;

(iii) A brief description of the facility and proposed operations, including the address or a map, e.g., a sketched or copied street map, of the facility location;

(iv) A statement encouraging people to contact the facility at least 72 hours before the meeting if they need special access to participate in the meeting; and

(v) The name, address, and telephone number of a contact person for the applicant.

R315-124-32. Procedures for Decisionmaking -- Public Notice Requirements at the Application Stage.

(a) Applicability. The requirements of Section R315-124-32 shall apply to all part B applications seeking initial permits for hazardous waste management units. The requirements of Section R315-124-32 shall also apply to part B applications seeking renewal of permits for such units under Section R315-270-51. The requirements of Section R315-124-32 do not apply to permit modifications under Section R315-270-42 or permit applications submitted for the sole purpose of conducting post-

closure activities or post-closure activities and corrective action at a facility.

(b) Notification at application submittal.

(1) The Director shall provide public notice as set forth in Subsection R315-124-10(c)(1)(ix), and notice to appropriate units of State and local government as set forth in Subsection R315-124-10(c)(1)(x), that a part B permit application has been submitted to the Director and is available for review.

(2) The notice shall be published within a reasonable period of time after the application is received by the Director. The notice shall include:

(i) The name and telephone number of the applicant's contact person;

(ii) The name and telephone number of the Division, and a mailing address to which information, opinions, and inquiries may be directed throughout the permit review process;

(iii) An address or email address to which people can write in order to be put on the facility mailing list;

(iv) The location where copies of the permit application and any supporting documents can be viewed and copied;

(v) A brief description of the facility and proposed operations, including the address or a map, e.g., a sketched or copied street map, of the facility location on the front page of the notice; and

(vi) The date that the application was submitted.

(c) Concurrent with the notice required under Subsection R315-124-32(b), the Director shall place the permit application and any supporting documents in a location accessible to the public in the vicinity of the facility or at the Division's office.

R315-124-33. Procedures for Decisionmaking -- Information Repository.

(a) Applicability. The requirements of Section R315-124-33 apply to all applications seeking permits for hazardous waste management units.

(b) The Director may assess the need, on a case-by-case basis, for an information repository. When assessing the need for an information repository, the Director shall consider a variety of factors, including: the level of public interest; the type of facility; the presence of an existing repository; and the proximity to the nearest copy of the administrative record. If the Director determines, at any time after submittal of a permit application, that there is a need for a repository, then the Director shall notify the facility that it shall establish and maintain an information repository. See Subsection R315-270-30(m) for similar provisions relating to the information repository during the life of a permit.

(c) The information repository shall contain all documents, reports, data, and information deemed necessary by the Director to fulfill the purposes for which the repository is established. The Director shall have the discretion to limit the contents of the repository.

(d) The information repository shall be located and maintained at a site chosen by the facility. If the Director finds the site unsuitable for the purposes and persons for which it was established, due to problems with the location, hours of availability, access, or other relevant considerations, then the Director shall specify a more appropriate site.

(e) The Director shall specify requirements for informing the public about the information repository. At a minimum, the Director shall require the facility to provide a written notice about the information repository to all individuals on the facility mailing list.

(f) The facility owner/operator shall be responsible for maintaining and updating the repository with appropriate information throughout a time period specified by the Director. The Director may close the repository at the Director's discretion, based on the factors in Subsection R315-124-33(b).

R315-124-34. Public Participation.

In addition to hearings required under the State Administrative Procedures Act and proceedings otherwise outlined or referenced in these rules, the Director shall not oppose intervention in any civil or administrative proceeding by any citizen where permissive intervention may be authorized by statute, rule or regulation. The Director shall publish notice of and provide at least 30 days for public comment on any proposed settlement of any enforcement action.

**KEY: hazardous waste
April 15, 2016**

19-6-105; 19-6-106

R315. Environmental Quality, Waste Management and Radiation Control, Waste Management.

R315-260. Hazardous Waste Management System.

R315-260-1. Purpose, scope, and applicability.

(a) Rule R315-260 provides definitions of terms, general standards, and overview information applicable to Rules R315-260 through 265 and 268.

R315-260-2. Availability of Information and Confidentiality of Information.

(a) Any information provided to The Director under Rules R315-15 and 101; Rules R315-260 through 266, 268, 270 and 273 will be made available to the public to the extent and in the manner authorized by Sections 63G-2-101 through 901.

(b) Except as provided under Subsection R315-260-2(c), any person who submits information to the Director in accordance with Rules R315-15 and 101; Rules R315-260 through 266, 268, 270 and 273 may assert a claim of business confidentiality covering part or all of that information by following the procedures set forth in Section 63G-2-309. Information covered by such a claim shall be disclosed by the Director only to the extent, and by means of the procedures, set forth Sections 63G-2-101 through 901 except that information required by Subsection R315-262-53(a) and Subsection R315-262-83 that is submitted to EPA in a notification of intent to export a hazardous waste shall be provided to the U.S. Department of State and the appropriate authorities in the transit and receiving or importing countries regardless of any claims of confidentiality. However, if no claim under Sections 63G-2-101 through 804 accompanies the information when it is received by the Director, it may be made available to the public without further notice to the person submitting it.

(c)(1) After August 6, 2014, no claim of business confidentiality may be asserted by any person with respect to information entered on a Hazardous Waste Manifest, EPA Form 8700-22, a Hazardous Waste Manifest Continuation Sheet, EPA Form 8700-22A, or an electronic manifest format that may be prepared and used in accordance with Subsection R315-262-20(a)(3).

(2) EPA shall make any electronic manifest that is prepared and used in accordance with Subsection R315-262-20(a)(3), or any paper manifest that is submitted to the system under Subsection R315-264-71(a)(6) or Subsection 40 CFR 265.71(a)(6), which is adopted by reference, available to the public under Section R315-260-2 when the electronic or paper manifest is a complete and final document. Electronic manifests and paper manifests submitted to the system are considered by EPA to be complete and final documents and publicly available information after 90 days have passed since the delivery to the designated facility of the hazardous waste shipment identified in the manifest.

R315-260-4. References to Other Statutes and Regulations.

(a) Federal statutes and regulations that are cited in Rules R315-260 through 266, 268, 270, 273 and 124 that are not specifically adopted by reference shall be used as guidance in interpreting the Rules R315-260 through 266, 268, 270, 273 and 124.

(b) Any reference to the "Department of Transportation" or "DOT" in Rules R315-260 through 266, 268, 270, 273 and 124 shall mean the "U.S. Department of Transportation".

R315-260-5. Inspections.

Any duly authorized officer, employee or representative of the Department or the Director may, in accordance with Section 19-6-109, enter upon and inspect any property, premise, or place on or at which solid or hazardous wastes are generated, transported, stored, treated or disposed of for the purpose of ascertaining the compliance with Rules R315-15, R315-101,

R315-124, R315-260 through 266, R315-268, R315-270, and R315-273. Inspectors may also inspect any waste and obtain samples thereof, including samples from any vehicle in which wastes are being transported or samples of any containers or labels. Inspectors may also have access to and the right to make copies of any records, either in hard copy or electronic format, relating to compliance with Rules R315-15, R315-101, R315-124, R315-260 through 266, R315-268, R315-270, and R315-273. Inspectors may also take photographs and make video and audio recordings while conducting authorized activities.

R315-260-10. Definitions.

(a) Terms used in Rules R315-15, R315-260 through 266, R315-268, R315-270, R315-273, and Rule R315-101 are defined in Sections 19-1-103 and 19-6-102.

(b) Terms used in Rule R315-15 are also defined in Sections 19-6-703 and 19-6-706(b).

(c) Additional terms used in Rules R315-260 through 266, R315-268, R315-270, R315-273, and Rule R315-101 are defined as follows:

(1) "Above ground tank" means a device meeting the definition of "tank" in Section R315-260-10 and that is situated in such a way that the entire surface area of the tank is completely above the plane of the adjacent surrounding surface and the entire surface area of the tank, including the tank bottom, is able to be visually inspected.

(2) "Active life" of a facility means the period from the initial receipt of hazardous waste at the facility until the Director receives certification of final closure.

(3) "Active portion" means that portion of a facility where treatment, storage, or disposal operations are being or have been conducted after November 19, 1980 and which is not a closed portion. See also "closed portion" and "inactive portion."

(4) "Approved hazardous waste management facility" or "approved facility" means a hazardous waste treatment, storage, or disposal facility which has received an EPA permit in accordance with federal requirements, has been approved under Section 19-6-108 and Rule R315-270, or has been permitted or approved under any other EPA authorized hazardous waste state program.

(5) "Ancillary equipment" means any device including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps, that is used to distribute, meter, or control the flow of hazardous waste from its point of generation to a storage or treatment tank(s), between hazardous waste storage and treatment tanks to a point of disposal onsite, or to a point of shipment for disposal off-site.

(6) "Aquifer" means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs.

(7) "Authorized representative" means the person responsible for the overall operation of a facility or an operational unit, i.e., part of a facility, e.g., the plant manager, superintendent or person of equivalent responsibility.

(8) "Battery" means a device consisting of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus such connections, electrical and mechanical, as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed.

(9) "Boiler" means an enclosed device using controlled flame combustion and having the following characteristics:

(i)(A) The unit shall have physical provisions for recovering and exporting thermal energy in the form of steam, heated fluids, or heated gases; and

(B) The unit's combustion chamber and primary energy

recovery sections(s) shall be of integral design. To be of integral design, the combustion chamber and the primary energy recovery section(s), such as waterwalls and superheaters, shall be physically formed into one manufactured or assembled unit. A unit in which the combustion chamber and the primary energy recovery section(s) are joined only by ducts or connections carrying flue gas is not integrally designed; however, secondary energy recovery equipment, such as economizers or air preheaters, need not be physically formed into the same unit as the combustion chamber and the primary energy recovery section. The following units are not precluded from being boilers solely because they are not of integral design: process heaters, units that transfer energy directly to a process stream, and fluidized bed combustion units; and

(C) While in operation, the unit shall maintain a thermal energy recovery efficiency of at least 60 percent, calculated in terms of the recovered energy compared with the thermal value of the fuel; and

(D) The unit shall export and utilize at least 75 percent of the recovered energy, calculated on an annual basis. In this calculation, no credit shall be given for recovered heat used internally in the same unit. Examples of internal use are the preheating of fuel or combustion air, and the driving of induced or forced draft fans or feedwater pumps; or

(ii) The unit is one which the Board has determined, on a case-by-case basis, to be a boiler, after considering the standards in Section R315-260-32

(10) "Carbon dioxide stream" means carbon dioxide that has been captured from an emission source, e.g., power plant, plus incidental associated substances derived from the source materials and the capture process, and any substances added to the stream to enable or improve the injection process.

(11) "Carbon regeneration unit" means any enclosed thermal treatment device used to regenerate spent activated carbon.

(12) "Cathode ray tube" or "CRT" means a vacuum tube, composed primarily of glass, which is the visual or video display component of an electronic device. A used, intact CRT means a CRT whose vacuum has not been released. A used, broken CRT means glass removed from its housing or casing whose vacuum has been released.

(13) "Certification" means a statement of professional opinion based upon knowledge and belief.

(14) "Closed portion" means that portion of a facility which an owner or operator has closed in accordance with the approved facility closure plan and all applicable closure requirements. See also "active portion" and "inactive portion".

(15) "Component" means either the tank or ancillary equipment of a tank system.

(16) "Confined aquifer" means an aquifer bounded above and below by impermeable beds or by beds of distinctly lower permeability than that of the aquifer itself; an aquifer containing confined ground water.

(17) "Contained" means held in a unit, including a land-based unit as defined in R315-260-10, that meets the following criteria:

(i) The unit is in good condition, with no leaks or other continuing or intermittent unpermitted releases of the hazardous secondary materials to the environment, and is designed, as appropriate for the hazardous secondary materials, to prevent releases of hazardous secondary materials to the environment. Unpermitted releases are releases that are not covered by a permit, such as a permit to discharge to water or air, and may include, but are not limited to, releases through surface transport by precipitation runoff, releases to soil and groundwater, wind-blown dust, fugitive air emissions, and catastrophic unit failures;

(ii) The unit is properly labeled or otherwise has a system, such as a log, to immediately identify the hazardous secondary materials in the unit; and

(iii) The unit holds hazardous secondary materials that are compatible with other hazardous secondary materials placed in the unit and is compatible with the materials used to construct the unit and addresses any potential risks of fires or explosions.

(iv) Hazardous secondary materials in units that meet the applicable requirements of Rules R315-264 or 265 are presumptively contained.

(18) "Container" means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

(19) "Containment building" means a hazardous waste management unit that is used to store or treat hazardous waste under the provisions of Subsections R315-264-1100 through 1102 or 40 CFR 265.1100 through 1102, which are adopted and incorporated by reference.

(20) "Contingency plan" means a document setting out an organized, planned, and coordinated course of action to be followed in case of a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

(21) "Corrosion expert" means a person who, by reason of his knowledge of the physical sciences and the principles of engineering and mathematics, acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person shall be certified as being qualified by the National Association of Corrosion Engineers (NACE) or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control on buried or submerged metal piping systems and metal tanks.

(22) "CRT collector" means a person who receives used, intact CRTs for recycling, repair, resale, or donation.

(23) "CRT glass manufacturer" means an operation or part of an operation that uses a furnace to manufacture CRT glass.

(24) "CRT processing" means conducting all of the following activities:

- (i) Receiving broken or intact CRTs; and
- (ii) Intentionally breaking intact CRTs or further breaking or separating broken CRTs; and
- (iii) Sorting or otherwise managing glass removed from CRT monitors.

(25) "Designated facility" means:

(i) A hazardous waste treatment, storage, or disposal facility which:

(A) Has received a permit, or interim status, in accordance with the requirements of Rule R315-270 and 124;

(B) Has received a permit, or interim status, from a State authorized in accordance with 40 CFR 27; or

(C) Is regulated under Subsection R315-261-6(c)(2) or Section R315-266-70; and

(D) That has been designated on the manifest by the generator pursuant to Section R315-262-20.

(ii) "Designated facility" also means a generator site designated on the manifest to receive its waste as a return shipment from a facility that has rejected the waste in accordance with Subsections R315-264-72(f) or 40 CFR 265.72(f), which is adopted and incorporated by reference.

(iii) If a waste is destined to a facility in an authorized State which has not yet obtained authorization to regulate that particular waste as hazardous, then the designated facility shall be a facility allowed by the receiving State to accept such waste.

(26) "Destination facility" means a facility that treats, disposes of, or recycles a particular category of universal waste, except those management activities described in Subsection R315-273-13(a) and (c) and Section R315-273-33. A facility at which a particular category of universal waste is only accumulated, is not a destination facility for purposes of managing that category of universal waste.

(27) "Dike" means an embankment or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids, or other materials.

(28) "Dioxins and furans (D/F)" means tetra, penta, hexa, hepta, and octa-chlorinated dibenzo dioxins and furans.

(29) "Discharge" or "hazardous waste discharge" means the accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of hazardous waste into or on any land or water.

(30) "Disposal facility" means a facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water, and at which waste will remain after closure. The term disposal facility does not include a corrective action management unit into which remediation wastes are placed.

(31) "Division" means the Division of Waste Management and Radiation Control.

(32) "Drip pad" is an engineered structure consisting of a curbed, free-draining base, constructed of non-earthen materials and designed to convey preservative kick-back or drippage from treated wood, precipitation, and surface water run-on to an associated collection system at wood preserving plants.

(33) "Elementary neutralization unit" means a device which:

(i) Is used for neutralizing wastes that are hazardous only because they exhibit the corrosivity characteristic defined in Section R315-261-22, or they are listed in Sections R315-261-30 through 35 only for this reason; and

(ii) Meets the definition of tank, tank system, container, transport vehicle, or vessel in Sections R315-260-10.

(34) "Electronic manifest, or e-Manifest" means the electronic format of the hazardous waste manifest that is obtained from EPA's national e-Manifest system and transmitted electronically to the system, and that is the legal equivalent of EPA Forms 8700-22, Manifest, and 8700-22A, Continuation Sheet.

(35) "Electronic Manifest System, or e-Manifest System" means EPA's national information technology system through which the electronic manifest may be obtained, completed, transmitted, and distributed to users of the electronic manifest and to regulatory agencies.

(36) "EPA hazardous waste number" means the number assigned by EPA to each hazardous waste listed in Sections R315-261-30 through 35 and to each characteristic identified in Sections R315-261-20 through 24.

(37) "EPA identification number" means the number assigned by EPA to each generator, transporter, and treatment, storage, or disposal facility.

(38) "EPA region" means the states and territories found in any one of the following ten regions:

(i) Region I-Maine, Vermont, New Hampshire, Massachusetts, Connecticut, and Rhode Island.

(ii) Region II-New York, New Jersey, Commonwealth of Puerto Rico, and the U.S. Virgin Islands.

(iii) Region III-Pennsylvania, Delaware, Maryland, West Virginia, Virginia, and the District of Columbia.

(iv) Region IV-Kentucky, Tennessee, North Carolina, Mississippi, Alabama, Georgia, South Carolina, and Florida.

(v) Region V-Minnesota, Wisconsin, Illinois, Michigan, Indiana and Ohio.

(vi) Region VI-New Mexico, Oklahoma, Arkansas, Louisiana, and Texas.

(vii) Region VII-Nebraska, Kansas, Missouri, and Iowa.

(viii) Region VIII-Montana, Wyoming, North Dakota, South Dakota, Utah, and Colorado.

(ix) Region IX-California, Nevada, Arizona, Hawaii, Guam, American Samoa, Commonwealth of the Northern Mariana Islands.

(x) Region X-Washington, Oregon, Idaho, and Alaska.

(39) "Equivalent method" means any testing or analytical

method approved by the Director under Sections R315-260-21 and 22.

(40) "Existing hazardous waste management (HWM) facility" or "existing facility" means a facility which was in operation or for which construction commenced on or before November 19, 1980. A facility has commenced construction if:

(i) The owner or operator has obtained the Federal, State and local approvals or permits necessary to begin physical construction; and either

(ii)(A) A continuous on-site, physical construction program has begun; or

(B) The owner or operator has entered into contractual obligations--which cannot be cancelled or modified without substantial loss--for physical construction of the facility to be completed within a reasonable time.

(41) "Existing portion" means that land surface area of an existing waste management unit, included in the original Part A permit application, on which wastes have been placed prior to the issuance of a permit.

(42) "Existing tank system" or "existing component" means a tank system or component that is used for the storage or treatment of hazardous waste and that is in operation, or for which installation has commenced on or prior to July 14, 1986, or December 16, 1988 for purposes of implementing the non-HSWA requirements of the tank regulations as promulgated by EPA on July 14, 1986, 51 FR 25470, as they have been incorporated into the corresponding rules of R315. A non-HSWA existing tank system or non-HSWA tank component is one which does not implement any of the requirements of the federal Hazardous and Solid Waste Amendments of 1984 (HSWA) as identified in Table 1 of 40 CFR 271.1. Installation shall be considered to have commenced if the owner or operator has obtained all Federal, State, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system and if either:

(i) a continuous on-site physical construction or installation program has begun; or

(ii) the owner or operator has entered into contractual obligations--which cannot be canceled or modified without substantial loss--for physical construction of the site or installation of the tank system to be completed within a reasonable time.

(43) "Facility" means:

(i) All contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste, or for managing hazardous secondary materials prior to reclamation. A facility may consist of several treatment, storage, or disposal operational units, e.g., one or more landfills, surface impoundments, or combinations of them.

(ii) For the purpose of implementing corrective action under Section R315-264-101, all contiguous property under the control of the owner or operator seeking a permit under Section 19-6-108. This definition also applies to facilities implementing corrective action under Utah reference.

(iii) Notwithstanding Subsection R315-1-10(43)(ii), a remediation waste management site is not a facility that is subject to Section R315-264-101, but is subject to corrective action requirements if the site is located within such a facility.

(44) "Federal agency" means any department, agency, or other instrumentality of the Federal Government, any independent agency or establishment of the Federal Government including any Government corporation, and the Government Printing Office.

(45) "Federal, State and local approvals or permits necessary to begin physical construction" means permits and approvals required under Federal, State or local hazardous waste control statutes, regulations or ordinances.

(46) "Final closure" means the closure of all hazardous

waste management units at the facility in accordance with all applicable closure requirements so that hazardous waste management activities under Rules R315-264 and 265 are no longer conducted at the facility unless subject to the provisions in Section R315-262-34.

(47) "Food-chain crops" means tobacco, crops grown for human consumption, and crops grown for feed for animals whose products are consumed by humans.

(48) "Free liquids" means liquids which readily separate from the solid portion of a waste under ambient temperature and pressure.

(49) "Freeboard" means the vertical distance between the top of a tank or surface impoundment dike, and the surface of the waste contained therein.

(50) "Generator" means any person, by site, whose act or process produces hazardous waste identified or listed in Rule R315-261 or whose act first causes a hazardous waste to become subject to regulation.

(51) "Ground water" means water below the land surface in a zone of saturation.

(52) "Hazard class" means:

(i) The DOT hazard class identified in 49 CFR 172; and

(ii) If the DOT hazard class is "OTHER REGULATED MATERIAL," ORM, the EPA hazardous waste characteristic exhibited by the waste and identified in Sections R315-261-20 through 24.

(53) "Hazardous secondary material" means a secondary material, e.g., spent material, by-product, or sludge, that, when discarded, would be identified as hazardous waste under Rule R315-261.

(54) "Hazardous secondary material generator" means any person whose act or process produces hazardous secondary materials at the generating facility. For purposes of Subsection R315-260-10(c)(59), "generating facility" means all contiguous property owned, leased, or otherwise controlled by the hazardous secondary material generator. For the purposes of Subsections R315-261-2(a)(2)(ii) and R315-261-4(a)(23), a facility that collects hazardous secondary materials from other persons is not the hazardous secondary material generator.

(55) "Hazardous waste constituent" means a constituent that caused the Board to list the hazardous waste in Sections R315-261-30 through 35, or a constituent listed in table 1 of Section R315-261-24.

(56) "Hazardous waste management unit" is a contiguous area of land on or in which hazardous waste is placed, or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area. Examples of hazardous waste management units include a surface impoundment, a waste pile, a land treatment area, a landfill cell, an incinerator, a tank and its associated piping and underlying containment system and a container storage area. A container alone does not constitute a unit; the unit includes containers and the land or pad upon which they are placed.

(57) "In operation" refers to a facility which is treating, storing, or disposing of hazardous waste.

(58) "Inactive portion" means that portion of a facility which is not operated after November 19, 1980. See also "active portion" and "closed portion".

(59) "Incinerator" means any enclosed device that:

(i) Uses controlled flame combustion and neither meets the criteria for classification as a boiler, sludge dryer, or carbon regeneration unit, nor is listed as an industrial furnace; or

(ii) Meets the definition of infrared incinerator or plasma arc incinerator.

(60) "Incompatible waste" means a hazardous waste which is unsuitable for:

(i) Placement in a particular device or facility because it may cause corrosion or decay of containment materials, e.g., container inner liners or tank walls; or

(ii) Commingling with another waste or material under uncontrolled conditions because the commingling might produce heat or pressure, fire or explosion, violent reaction, toxic dusts, mists, fumes, or gases, or flammable fumes or gases.

(61) "Individual generation site" means the contiguous site at or on which one or more hazardous wastes are generated. An individual generation site, such as a large manufacturing plant, may have one or more sources of hazardous waste but is considered a single or individual generation site if the site or property is contiguous.

(62) "Industrial furnace" means any of the following enclosed devices that are integral components of manufacturing processes and that use thermal treatment to accomplish recovery of materials or energy:

(i) Cement kilns;

(ii) Lime kilns;

(iii) Aggregate kilns;

(iv) Phosphate kilns;

(v) Coke ovens;

(vi) Blast furnaces;

(vii) Smelting, melting and refining furnaces, including pyrometallurgical devices such as cupolas, reverberator furnaces, sintering machine, roasters, and foundry furnaces;

(viii) Titanium dioxide chloride process oxidation reactors;

(ix) Methane reforming furnaces;

(x) Pulping liquor recovery furnaces;

(xi) Combustion devices used in the recovery of sulfur values from spent sulfuric acid;

(xii) Halogen acid furnaces (HAFs) for the production of acid from halogenated hazardous waste generated by chemical production facilities where the furnace is located on the site of a chemical production facility, the acid product has a halogen acid content of at least 3%, the acid product is used in a manufacturing process, and, except for hazardous waste burned as fuel, hazardous waste fed to the furnace has a minimum halogen content of 20% as-generated.

(xiii) Such other devices as the Board may, after notice and comment, add to this list on the basis of one or more of the following factors:

(A) The design and use of the device primarily to accomplish recovery of material products;

(B) The use of the device to burn or reduce raw materials to make a material product;

(C) The use of the device to burn or reduce secondary materials as effective substitutes for raw materials, in processes using raw materials as principal feedstocks;

(D) The use of the device to burn or reduce secondary materials as ingredients in an industrial process to make a material product;

(E) The use of the device in common industrial practice to produce a material product; and

(F) Other factors, as appropriate.

(63) "Infrared incinerator" means any enclosed device that uses electric powered resistance heaters as a source of radiant heat followed by an afterburner using controlled flame combustion and which is not listed as an industrial furnace.

(64) "Inground tank" means a device meeting the definition of "tank" in Section R315-260-10 whereby a portion of the tank wall is situated to any degree within the ground, thereby preventing visual inspection of that external surface area of the tank that is in the ground.

(65) "Injection well" means a well into which fluids are injected. See also "underground injection".

(66) "Inner liner" means a continuous layer of material placed inside a tank or container which protects the construction materials of the tank or container from the contained waste or reagents used to treat the waste.

(67) "Installation inspector" means a person who, by

reason of his knowledge of the physical sciences and the principles of engineering, acquired by a professional education and related practical experience, is qualified to supervise the installation of tank systems.

(68) "Intermediate facility" means any facility that stores hazardous secondary materials for more than 10 days, other than a hazardous secondary material generator or reclaimer of such material.

(69) "International shipment" means the transportation of hazardous waste into or out of the jurisdiction of the United States.

(70) "Lamp," also referred to as "universal waste lamp", is defined as the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infra-red regions of the electromagnetic spectrum. Examples of common universal waste electric lamps include, but are not limited to, fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps.

(71) "Land-based unit" means an area where hazardous secondary materials are placed in or on the land before recycling. This definition does not include land-based production units.

(72) "Landfill" means a disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a pile, a land treatment facility, a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground mine, a cave, or a corrective action management unit.

(73) "Landfill cell" means a discrete volume of a hazardous waste landfill which uses a liner to provide isolation of wastes from adjacent cells or wastes. Examples of landfill cells are trenches and pits.

(74) "Land treatment facility" means a facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface; such facilities are disposal facilities if the waste will remain after closure.

(75) "Leachate" means any liquid, including any suspended components in the liquid, that has percolated through or drained from hazardous waste.

(76) "Leak-detection system" means a system capable of detecting the failure of either the primary or secondary containment structure or the presence of a release of hazardous waste or accumulated liquid in the secondary containment structure. Such a system shall employ operational controls, e.g., daily visual inspections for releases into the secondary containment system of aboveground tanks, or consist of an interstitial monitoring device designed to detect continuously and automatically the failure of the primary or secondary containment structure or the presence of a release of hazardous waste into the secondary containment structure.

(77) "Liner" means a continuous layer of natural or man-made materials, beneath or on the sides of a surface impoundment, landfill, or landfill cell, which restricts the downward or lateral escape of hazardous waste, hazardous waste constituents, or leachate.

(78) "Management" or "hazardous waste management" means the systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery, and disposal of hazardous waste.

(79) "Manifest" is defined in Subsection 19-6-102(14) and is further defined as: the shipping document EPA Form 8700-22, including, if necessary, EPA Form 8700-22A, or the electronic manifest, originated and signed in accordance with the applicable requirements of Rules R315-262 through 265.

(80) "Manifest tracking number" means: The alphanumeric identification number, i.e., a unique three letter suffix preceded by nine numerical digits, which is pre-printed in Item 4 of the Manifest by a registered source.

(81) "Mercury-containing equipment" means a device or part of a device, including thermostats, but excluding batteries and lamps, that contains elemental mercury integral to its function.

(82) "Mining overburden returned to the mine site" means any material overlying an economic mineral deposit which is removed to gain access to that deposit and is then used for reclamation of a surface mine.

(83) "Miscellaneous unit" means a hazardous waste management unit where hazardous waste is treated, stored, or disposed of and that is not a container, tank, surface impoundment, pile, land treatment unit, landfill, incinerator, boiler, industrial furnace, underground injection well with appropriate technical standards under 40 CFR 146, containment building, corrective action management unit, unit eligible for a research, development, and demonstration permit under Section R315-270-65, or staging pile.

(84) "Monitoring" means all procedures used to systematically inspect and collect data on operational parameters of the facility or on the quality of the air, ground water, surface water, or soils.

(85) "Movement" means that hazardous waste transported to a facility in an individual vehicle.

(86) "New hazardous waste management facility" or "new facility" means a facility which began operation, or for which construction commenced after November 19, 1980. See also "Existing hazardous waste management facility".

(87) "New tank system" or "new tank component" means a tank system or component that will be used for the storage or treatment of hazardous waste and for which installation has commenced after July 14, 1986; except, however, for purposes of Subsections R315-264-193(g)(2) and 40 CFR 265.193(g)(2), which is adopted and incorporated by reference, a new tank system is one for which construction commences after July 14, 1986, or December 16, 1988 for purposes of implementing the non-HSWA requirements of the tank regulations as promulgated by EPA on July 14, 1986, 51 FR 25470, as they have been incorporated into the corresponding rules of R315; except, however, for purposes of 40 CFR 265-193(g)(2), which is adopted and incorporated by reference, and Subsection R315-264-193(g)(2), a new tank system is one which construction commences after July 14, 1986. A non-HSWA new tank system or non-HSWA new tank component is one which does not implement any of the requirements of the federal Hazardous and Solid Waste Amendments of 1984 (HSWA) as identified in Table 1 of 40 CFR 271.1. See also "existing tank system."

(88) "No free liquids, as used in Subsections R315-261-4(a)(26) and R315-261-4(b)(18)", means that solvent-contaminated wipes may not contain free liquids as determined by Method 9095B, Paint Filter Liquids Test, included in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, and that there is no free liquid in the container holding the wipes. No free liquids may also be determined using another standard or test method as defined by the Director.

(89) "On ground tank" means a device meeting the definition of "tank" in Section R315-260-10 and that is situated in such a way that the bottom of the tank is on the same level as the adjacent surrounding surface so that the external tank bottom cannot be visually inspected.

(90) "On-site" means the same or geographically contiguous property which may be divided by public or private right-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along, the right-of-way. Non-contiguous properties owned by the same person but connected by a right-of-way which he controls and to which the public does not have access, is also considered on-site property.

(91) "Open burning" means the combustion of any

material without the following characteristics:

(i) Control of combustion air to maintain adequate temperature for efficient combustion,

(ii) Containment of the combustion-reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion, and

(iii) Control of emission of the gaseous combustion products. See also "incineration" and "thermal treatment".

(92) "Operator" means the person responsible for the overall operation of a facility.

(93) "Owner" means the person who owns a facility or part of a facility.

(94) "Partial closure" means the closure of a hazardous waste management unit in accordance with the applicable closure requirements of Rules R315-264 and 265 at a facility that contains other active hazardous waste management units. For example, partial closure may include the closure of a tank, including its associated piping and underlying containment systems, landfill cell, surface impoundment, waste pile, or other hazardous waste management unit, while other units of the same facility continue to operate.

(95) "Polychlorinated biphenyl, PCB" and "PCBs" means any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contains such substance. PCB and PCBs as contained in PCB items are defined in Section R315-260-10. For any purposes under Rules R315-260 through 266, 268, 270, 273, R315-15, and R315-5-101, inadvertently generated non-Aroclor PCBs are defined as the total PCBs calculated following division of the quantity of monochlorinated biphenyls by 50 and dichlorinated biphenyls by 5.

(96) "PCB Item" means any PCB Article, PCB Article Container, PCB Container, PCB Equipment, or anything that deliberately or unintentionally contains or has as a part of it any PCB or PCBs.

(97) "Permit" means the plan approval as required by subsection 19-6-108(3)(a), or equivalent control document issued by the Director to implement the requirements of the Utah Solid and Hazardous Waste Act;

(98) "Permittee" is defined in Subsection 19-6-102(18) and includes any person who has received an approval of a hazardous waste operation plan under Section 19-6-108 and Rule R315-262 or a Federal RCRA permit for a treatment, storage, or disposal facility.

(99) "Person" means an individual, trust, firm, joint stock company, Federal Agency, corporation, including a government corporation, partnership, association, State, municipality, commission, political subdivision of a State, or any interstate body.

(100) "Personnel" or "facility personnel" means all persons who work at, or oversee the operations of, a hazardous waste facility, and whose actions or failure to act may result in noncompliance with the requirements of Rules R315-264 or 265.

(101) "Pesticide" means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant, other than any article that:

(i) Is a new animal drug under FFDCA section 201(w), or

(ii) Is an animal drug that has been determined by regulation of the Secretary of Health and Human Services not to be a new animal drug, or

(iii) Is an animal feed under FFDCA section 201(x) that bears or contains any substances described by Subsection R315-260-10(107)(i) or (ii).

(102) "Pile" means any non-containerized accumulation of solid, nonflowing hazardous waste that is used for treatment or storage and that is not a containment building.

(103) "Plasma arc incinerator" means any enclosed device

using a high intensity electrical discharge or arc as a source of heat followed by an afterburner using controlled flame combustion and which is not listed as an industrial furnace.

(104) "POHC's" means principle organic hazardous constituents.

(105) "Point source" means any discernible, confined, and discrete conveyance, including, but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

(106) "Precipitation run-off" means water generated from naturally occurring storm events. If the precipitation run-off has been in contact with a waste defined in Sections R315-261-20 through 24, it qualifies as "precipitation run-off" if the water does not exhibit any of the characteristics identified in Section R315-261-20 through 24. If the precipitation run-off has been in contact with a waste listed in Sections R315-261-30 through 35, then it qualifies as "precipitation run-off" when the water has been excluded under Section R315-260-22. Water containing any leachate does not qualify as "precipitation run-off".

(107) "Publicly owned treatment works" or "POTW" means any device or system used in the treatment, including recycling and reclamation, of municipal sewage or industrial wastes of a liquid nature which is owned by the State or a political subdivision within the State. This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

(108) "Qualified Ground-Water Scientist" means a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering, and has sufficient training and experience in ground-water hydrology and related fields as may be demonstrated by state registration, professional certifications, or completion of accredited university courses that enable that individual to make sound professional judgements regarding ground-water monitoring and contaminant fate and transport.

(109) "RCRA" means the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. section 6901 et seq.

(110) "Remanufacturing" means processing a higher-value hazardous secondary material in order to manufacture a product that serves a similar functional purpose as the original commercial-grade material. For the purpose of this definition, a hazardous secondary material is considered higher-value if it was generated from the use of a commercial-grade material in a manufacturing process and can be remanufactured into a similar commercial-grade material.

(111) "Remediation waste" means all solid and hazardous wastes, and all media, including ground water, surface water, soils, and sediments, and debris, that are managed for implementing cleanup.

(112) "Remediation waste management site" means a facility where an owner or operator is or will be treating, storing or disposing of hazardous remediation wastes. A remediation waste management site is not a facility that is subject to corrective action under Section R315-264-101, but is subject to corrective action requirements if the site is located in such a facility.

(113)(i) "Replacement unit" means a landfill, surface impoundment, or waste pile unit:

(A) from which all or substantially all of the waste is removed; and

(B) that is subsequently reused to treat, store, or dispose of hazardous waste.

(ii) "Replacement unit" does not apply to a unit from which waste is removed during closure, if the subsequent reuse

solely involves the disposal of waste from that unit and other closing units or corrective action areas at the facility, in accordance with a closure plan approved by the Director or a corrective action approved by the Director.

(114) "Representative sample" means a sample of a universe or whole, e.g., waste pile, lagoon, ground water, which can be expected to exhibit the average properties of the universe or whole.

(115) "Run-off" means any rainwater, leachate, or other liquid that drains over land from any part of a facility.

(116) "Run-on" means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.

(117) "Saturated zone" or "zone of saturation" means that part of the earth's crust in which all voids are filled with water.

(118) "Sludge" means any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.

(119) "Sludge dryer" means any enclosed thermal treatment device that is used to dehydrate sludge and that has a maximum total thermal input, excluding the heating value of the sludge itself, of 2,500 Btu/lb of sludge treated on a wet-weight basis.

(120) "Small Quantity Generator" means a generator who generates less than 1000 kg of hazardous waste in a calendar month.

(121) "Solid Waste Management Unit" means any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

(122) "Solvent-contaminated wipe" means:

(i) A wipe that, after use or after cleaning up a spill, either:

(A) Contains one or more of the F001 through F005 solvents listed in Section R315-261-31 or the corresponding P- or U- listed solvents found in Section R315-261-33;

(B) Exhibits a hazardous characteristic found in Sections R315-261-20 through 24 when that characteristic results from a solvent listed in Rule R315-261; and/or

(C) Exhibits only the hazardous waste characteristic of ignitability found in Section R315-261-21 due to the presence of one or more solvents that are not listed in Rule R315-261.

(ii) Solvent-contaminated wipes that contain listed hazardous waste other than solvents, or exhibit the characteristic of toxicity, corrosivity, or reactivity due to contaminants other than solvents, are not eligible for the exclusions at Subsections R315-261-4(a)(26) and R315-261-4(b)(18).

(123) "Sorbent" means a material that is used to soak up free liquids by either adsorption or absorption, or both.

(124) "Sorb" means to either adsorb or absorb, or both.

(125) A "spent material" is any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing.

(126) "Spill" means the accidental discharging, spilling, leaking, pumping, pouring, emitting, emptying, releasing, or dumping of hazardous wastes or materials which, when spilled, become hazardous wastes, into or on any land or water.

(127) "Staging pile" means an accumulation of solid, non-flowing remediation waste, as defined in Section R315-260-10, that is not a containment building and that is used only during remedial operations for temporary storage at a facility. Staging piles shall be designated by the Director according to the requirements of Section R315-264-554.

(128) "State" means the state of Utah.

(129) "Storage" is defined in Subsection 19-6-102(20) and includes the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of,

or stored elsewhere.

(130) "Sump" means any pit or reservoir that meets the definition of tank and those troughs/trenches connected to it that serve to collect hazardous waste for transport to hazardous waste storage, treatment, or disposal facilities; except that as used in the landfill, surface impoundment, and waste pile rules, "sump" means any lined pit or reservoir that serves to collect liquids drained from a leachate collection and removal system or leak detection system for subsequent removal from the system.

(131) "Surface impoundment" or "impoundment" means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials, although it may be lined with man-made materials, which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons.

(132) "Tank" means a stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials, e.g., wood, concrete, steel, plastic, which provide structural support.

(133) "Tank system" means a hazardous waste storage or treatment tank and its associated ancillary equipment and containment system.

(134) "TEQ" means toxicity equivalence, the international method of relating the toxicity of various dioxin/furan congeners to the toxicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin.

(135) "Thermal treatment" means the treatment of hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the hazardous waste. Examples of thermal treatment processes are incineration, molten salt, pyrolysis, calcination, wet air oxidation, and microwave discharge. See also "incinerator" and "open burning".

(136) "Thermostat" means a temperature control device that contains metallic mercury in an ampule attached to a bimetal sensing element, and mercury-containing ampules that have been removed from these temperature control devices in compliance with the requirements of Subsections R315-273-13(c)(2) or R315-273-33(c)(2).

(137) "Totally enclosed treatment facility" means a facility for the treatment of hazardous waste which is directly connected to an industrial production process and which is constructed and operated in a manner which prevents the release of any hazardous waste or any constituent thereof into the environment during treatment. An example is a pipe in which waste acid is neutralized.

(138) "Transfer facility" means any transportation-related facility, including loading docks, parking areas, storage areas and other similar areas where shipments of hazardous waste or hazardous secondary materials are held during the normal course of transportation.

(139) "Transport vehicle" means a motor vehicle or rail car used for the transportation of cargo by any mode. Each cargo-carrying body; trailer, railroad freight car, etc.; is a separate transport vehicle.

(140) "Transportation" is defined in Subsection 19-6-102(21) and includes the movement of hazardous waste by air, rail, highway, or water.

(141) "Transporter" means a person engaged in the offsite transportation of hazardous waste by air, rail, highway, or water.

(142)(i) "Treatability Study" means a study in which a hazardous waste is subjected to a treatment process to determine:

(A) Whether the waste is amenable to the treatment process,

(B) what pretreatment, if any, is required,

(C) the optimal process conditions needed to achieve the desired treatment,

(D) the efficiency of a treatment process for a specific waste or wastes, or

(E) the characteristics and volumes of residuals from a particular treatment process.

(ii) Also included in this definition for the purpose of the Subsection R315-261-4 (e) and (f) exemptions are liner compatibility, corrosion, and other material compatibility studies and toxicological and health effects studies.

(iii) A "treatability study" is not a means to commercially treat or dispose of hazardous waste.

(143) "Treatment" is defined in Subsection 19-6-102(22) and includes any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste non-hazardous, or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume.

(144) "Treatment zone" means a soil area of the unsaturated zone of a land treatment unit within which hazardous constituents are degraded, transformed, or immobilized.

(145) "Underground injection" means the subsurface emplacement of fluids through a bored, drilled or driven well; or through a dug well, where the depth of the dug well is greater than the largest surface dimension. See also "injection well".

(146) "Underground tank" means a device meeting the definition of "tank" in Section R315-260-10 whose entire surface area is totally below the surface of and covered by the ground.

(147) "Unfit-for use tank system" means a tank system that has been determined through an integrity assessment or other inspection to be no longer capable of storing or treating hazardous waste without posing a threat of release of hazardous waste to the environment.

(148) "United States" means the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

(149) "Universal waste" means any of the following hazardous wastes that are managed under the universal waste requirements of Rule R315-273:

(i) Batteries as described in Section R315-273-2;

(ii) Pesticides as described in Section R315-273-3;

(iii) Mercury-containing equipment as described in Section R315-273-4;

(iv) Lamps as described in Section R315-273-5;

(v) Antifreeze as described in Subsection R315-273-6(a);

and

(vi) Aerosol cans as described in Subsection R315-273-6(b).

(150) Universal Waste Handler

(i) Means:

(A) A generator of universal waste; or

(B) The owner or operator of a facility, including all contiguous property, that receives universal waste from other universal waste handlers, accumulates universal waste, and sends universal waste to another universal waste handler, to a destination facility, or to a foreign destination.

(ii) Does not mean:

(A) A person who treats, except under the provisions of Subsection R315-273-13(a) or (c), or R315-273-33(a) or (c), disposes of, or recycles universal waste; or

(B) A person engaged in the off-site transportation of universal waste by air, rail, highway, or water, including a universal waste transfer facility.

(151) "Universal Waste Transporter" means a person engaged in the off-site transportation of universal waste by air, rail, highway, or water.

(152) "Unsaturated zone" or "zone of aeration" means the zone between the land surface and the water table.

(153) "Uppermost aquifer" means the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

(154) Used oil is defined in Subsection 19-6-703(19).

(155) "User of the electronic manifest system" means a hazardous waste generator, a hazardous waste transporter, an owner or operator of a hazardous waste treatment, storage, recycling, or disposal facility, or any other person that:

(i) Is required to use a manifest to comply with:

(A) Any federal or state requirement to track the shipment, transportation, and receipt of hazardous waste or other waste material that is shipped from the site of generation to an off-site designated facility for treatment, storage, recycling, or disposal; or

(B) Any federal or state requirement to track the shipment, transportation, and receipt of rejected wastes or regulated container residues that are shipped from a designated facility to an alternative facility, or returned to the generator; and

(ii) Elects to use the system to obtain, complete and transmit an electronic manifest format supplied by the EPA electronic manifest system, or

(iii) Elects to use the paper manifest form and submits to the system for data processing purposes a paper copy of the manifest, or data from such a paper copy, in accordance with Subsections R315-264-71(a)(2)(v) or 40 CFR 265.71(a)(2)(v) which is adopted and incorporated by reference. These paper copies are submitted for data exchange purposes only and are not the official copies of record for legal purposes.

(156) "Vessel" includes every description of watercraft, used or capable of being used as a means of transportation on the water.

(157) "Waste management area" means the limit projected in the horizontal plane of the area on which waste will be placed during the active life of a regulated unit. The waste management area includes horizontal space taken up by any liner, dike, or other barrier designed to contain waste in a regulated unit. If the facility contains more than one regulated unit, the waste management area is described by an imaginary line circumscribing the several regulated units.

(158) "Wastewater treatment unit" means a device which:

(i) Is part of a wastewater treatment facility that is subject to regulation under either section 402 or 307(b) of the Clean Water Act; and

(ii) Receives and treats or stores an influent wastewater that is a hazardous waste as defined in Section R315-261-3, or that generates and accumulates a wastewater treatment sludge that is a hazardous waste as defined in Section R315-261-3, or treats or stores a wastewater treatment sludge which is a hazardous waste as defined in Section R315-261-3; and

(iii) Meets the definition of tank or tank system in Section R315-260-10.

(159) "Water, bulk shipment" means the bulk transportation of hazardous waste which is loaded or carried on board a vessel without containers or labels.

(160) "Well" means any shaft or pit dug or bored into the earth, generally of a cylindrical form, and often walled with bricks or tubing to prevent the earth from caving in.

(161) "Well injection": See "underground injection"

(162) "Wipe" means a woven or non-woven shop towel, rag, pad, or swab made of wood pulp, fabric, cotton, polyester blends, or other material.

(163) "Zone of engineering control" means an area under the control of the owner/operator that, upon detection of a

hazardous waste release, can be readily cleaned up prior to the release of hazardous waste or hazardous constituents to ground water or surface water.

R315-260-11. References.

(a) For purposes of Rules R315-260 through 266, 268, 270, and 273, Rule R315-15 and Rule R315-101, 40 CFR 260.11, 2015 ed, is adopted and incorporated by reference.

R315-260-12. Definitions for Rule R315-101.

(a) For purposes of Rule R315-101 regarding cleanup action and Risk-Based Closure Standards, the following terms are defined:

(1) "Acceptable Risk" means Cancer Risk greater than 1×10^{-6} but less than or equal to 1×10^{-4} or a Hazard Index less than or equal to one with justifiable, reasonable and practicable measures in place to reduce and control risk within the range.

(2) "Appropriate Site Management Activities" means measures that are reasonable and practical that will be taken to control and reduce risks greater than 1×10^{-6} and less than 1×10^{-4} for carcinogens and Hazard Index equal to or less than one for non-carcinogens under both current and reasonably anticipated future land use conditions, e.g. institutional controls, engineering controls, groundwater monitoring, post-closure care, or corrective action and ensuring that all assumptions made in the estimation of Cancer Risk and non-cancer hazard in the risk assessment report are not violated.

(3) "Area of Contamination" means a Hazardous Waste Management Unit or a Solid Waste Management Unit or an area where a release has occurred.

(4) "The boundary" is defined as the furthest extent where contamination from a defined source has migrated in any medium at the time the release is first identified.

(5) "Cleanup" Means the range of corrective action activities that occur in the context of addressing environmental contamination at RCRA sites to lower contaminant concentration or decrease chemical toxicity. Activities may include waste removal, contaminated media removal or source reduction (e.g. excavation, pumping), in-place treatment of waste or contaminated media (e.g. bioremediation), containment of waste or contaminated media, (e.g. barrier walls, low permeability covers, liners), or various combination of these approaches. Waste cover up or capping is not considered waste cleanup.

(6) "Concentration Term - 95% Upper Confidence Limit" or "C" means the intake variable and it is an estimate of the arithmetic average concentration for a contaminant based on a set of site sampling results. Because of the uncertainty associated with estimating the true average concentration at a site, the 95% Upper Confidence Limit of the arithmetic mean is used to represent this variable and provides reasonable confidence that the true site average will not be underestimated.

(7) "Contaminate" means to render a medium polluted through the introduction of hazardous waste or hazardous constituents as identified in Rule R315-261, Appendix VIII.

(8) "Corrective Action" means the cleanup process or program under RCRA and all activities related to the investigation, characterization, and cleanup of release of hazardous waste or hazardous constituents from Solid Waste Management Units or Hazardous Waste Management Units at a permitted or interim status Treatment Storage Disposal Facilities or any environmental medium.

(9) "Corrective Action Complete With Controls" is a condition of a Solid Waste Management Unit, a Hazardous Waste Management Unit, an Area of Contamination or a contaminated site at closure meeting the requirements of R315-101-6(k)(4).

(10) "Corrective Action Complete Without Controls" is a condition of a Solid Waste Management Unit, a Hazardous

Waste Management Unit, or a contaminated site at closure equivalent to a no further action meeting the requirements of R315-101-6(k)(5) or R315-101-6(f) or R315-101-6(j).

(11) Environment means the surroundings or conditions in which a person, animal, or plant lives or operates.

(12) "Hazard Index" means the sum of Hazard Quotients.

(13) "Hazard Quotient" means the ratio of exposed dose to some Reference Dose or Reference Concentration.

(14) "Natural Resources" means land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources.

(15) "No Further Action" means the state of a Solid Waste Management Unit, a Hazardous Waste Management Unit, or a contaminated site at closure meeting the requirements in R315-101-6(f) or R315-101-6(j) and it is equivalent to Corrective Action Complete Without Controls if the site was under corrective action activities. No further action is equivalent to unrestricted land use.

(16) "Potentially Complete Exposure Pathway" is a pathway which, due to current site conditions is incomplete, but could become complete at a future time because of changing site practices. An example would be the ingestion pathway of groundwater from a residential well in a high total dissolved solids aquifer. This pathway could be complete if treatment technologies like reverse osmosis become economically feasible and are observed to be employed successfully in that aquifer.

(17) "Reasonable Maximum Exposure" means the highest exposure that is reasonably expected to occur at a site. Reasonable Maximum Exposure combines upper-bound and mid-range exposure factors so that the result represents an exposure scenario that is both protective and reasonable; not the worst possible case.

(18) "Release" means spill or discharge of hazardous waste, hazardous constituents, or material that becomes hazardous waste when released to the environment.

(19) "Responsible Party" means the owner or operator of a facility, or any other person responsible for the release of hazardous waste or hazardous constituents.

(20) "Risk-Based Clean Closure" means closure of a site where hazardous waste was managed or any medium that has been contaminated by a release of hazardous waste or hazardous constituents, and where hazardous waste or hazardous constituents remain at the site in any medium at concentrations determined, in this rule, to cause minimal levels of risk to human health and the environment so as to require no further action or monitoring on the part of the Responsible Party nor any notice of hazardous waste management on the deed to the property.

(21) "Risk Based Concentration" means the concentration of a contaminant the values of which are derived from equations combining toxicity factors with standard exposure scenarios to calculate chemical concentrations corresponding to some fixed levels of risks in any media (water, air, fish tissue, sediment, and soil).

(22) "Robust Statistic" means a statistic that is resistant to errors in the results, produced by deviations from assumptions, e.g., of normality. This means that the limits are not susceptible to outliers, or distributional assumptions. For example, if the limits are centered on the median, instead of on the mean, or on a modified, "robust mean", and constructed with suitable weighting, or influence, function, they could be considered "robust."

(23) "Site" means the Area of Contamination and any other area that could be impacted by the released contaminants, or could influence the migration of those contaminants, regardless of whether the site is owned by the Responsible Party.

(24) "Target Risk" means any specified risk level.

R315-260-19. Variances Authorized.

(a) Variances shall be granted by the Board only to the extent allowed under State and Federal law.

(b) The Board may consider a variance request in accordance with the standard established in section 19-6-111.

(c) The Board may, at its own instance, review any variance granted during the term for which a variance was granted.

(d) A person applying for a variance shall submit the application, in writing, to the Director. The application shall provide the following:

(1) Citation of the statutory, regulatory, or permit requirement from which the variance is sought;

(2) For variances for which the Board promulgates or has promulgated specific rules, information meeting the requirements of those rules;

(3) Information demonstrating that application of or compliance with the requirement would cause undue or unreasonable hardship on the person applying for the variance;

(4) Proposed alternative requirements, if any;

(5) Information demonstrating that the variance will achieve the purpose and intent of the statutory, regulatory, or permit provision from which the variance is sought;

(6) Information demonstrating that any alternative requirement or requirements will adequately protect human health and the environment; and

(7) If no alternative requirement is proposed, information demonstrating that if the variance is granted, human health and the environment will be adequately protected.

(e) A person applying for a variance shall provide such additional information as the Board or the Director requires.

(f) Nothing in Subsection R315-260-19(d) or (e) limits the authority of the Board to grant variances in accordance with the standard established in Section 19-6-111. A person applying for a variance under Section R315-263-32 shall provide such information described in Subsection R315-260-19(d) as the Director determines.

R315-260-20. Petition to Amend Rules.

(a) It is the intent of the Board to insure the compatibility and equivalency of Rules R315-260 through 266, 268, 270, 273 and 124 with the regulations promulgated by EPA under the Resource Conservation and Recovery Act of 1976.

(b) Any person may petition the Board to modify or revoke any provision in Rules R315-260 through 266, 268, 270, 273, Rule R315-15 Rule R315-101, R315-102, and R315-124. A petition shall be considered under the procedures outlined in Section 63G-3-601 and Rule R15-2.

R315-260-21. Petitions for Equivalent Testing or Analytical Methods.

(a) Any person seeking to add a testing or analytical method to Rules R315-261, R315-264, or R315-265 may petition for a regulatory amendment under Section R315-260-21 and Section R315-260-20. To be successful, the person shall demonstrate to the satisfaction of the Board that the proposed method is equal to or superior to the corresponding method prescribed in Rules R315-261, R315-264, or R315-265, in terms of its sensitivity, accuracy, and precision, i.e., reproducibility.

(b) Each petition shall include, in addition to the information required by Section R315-260-20:

(1) A full description of the proposed method, including all procedural steps and equipment used in the method;

(2) A description of the types of wastes or waste matrices for which the proposed method may be used;

(3) Comparative results obtained from using the proposed method with those obtained from using the relevant or corresponding methods prescribed in Rules R315-261, R315-264, or R315-265;

(4) An assessment of any factors which may interfere with, or limit the use of, the proposed method; and

(5) A description of the quality control procedures necessary to ensure the sensitivity, accuracy and precision of the proposed method.

(c) After receiving a petition for an equivalent method, the Board may request any additional information on the proposed method which he may reasonably require to evaluate the method.

(d) If the Board amends the rules to permit use of a new testing method, the method shall be incorporated by reference in Section R315-260-11.

(e) Petitioner may, alternatively, proceed under the provisions of 40 CFR 260.21 to have an alternative analytical method approved by EPA. In the event approval is granted, the petitioner shall so notify the Board and the Director and the decision of EPA shall be binding upon the Board and the Director.

R315-260-22. Petitions to Amend Rule to Exclude a Waste Produced at a Particular Facility.

(a) Any person seeking to exclude a waste at a particular generating facility from the lists in Sections R315-261-30 through 35 may petition for a regulatory amendment under Section R315-260-22 and Section R315-260-20. To be successful:

(1) The petitioner shall demonstrate to the satisfaction of the Board that the waste produced by a particular generating facility does not meet any of the criteria under which the waste was listed as a hazardous or an acutely hazardous waste; and

(2) Based on a complete application, the Board shall determine, where it has a reasonable basis to believe that factors, including additional constituents, other than those for which the waste was listed could cause the waste to be a hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste. A waste which is so excluded, however, still may be a hazardous waste by operation of Sections 261-20 through 24.

(b) The procedures in Sections R315-260-22 and R315-260-20 may also be used to petition the Board for a regulatory amendment to exclude from Subsections R315-261-3(a)(2)(ii) or (c), a waste which is described in Subsections R315-261-3(a)(2)(ii) or (c) and is either a waste listed Sections R315-261-30 through 35 or is derived from a waste listed in Sections R315-261-30 through 35. This exclusion may only be issued for a particular generating, storage, treatment, or disposal facility. The petitioner shall make the same demonstration as required by Subsection R315-260-22(a). Where the waste is a mixture of solid waste and one or more listed hazardous wastes or is derived from one or more hazardous wastes, his demonstration shall be made with respect to the waste mixture as a whole; analyses shall be conducted for not only those constituents for which the listed waste contained in the mixture was listed as hazardous, but also for factors, including additional constituents, that could cause the waste mixture to be a hazardous waste. A waste which is so excluded may still be a hazardous waste by operation of Sections R315-261-20 through 24.

(c) If the waste is listed with codes "I", "C", "R", or "E", in Sections R315-261-30 through 35,

(1) The petitioner shall show that the waste does not exhibit the relevant characteristic for which the waste was listed as defined in Sections R315-261-21 through 24 using any applicable methods prescribed therein. The petitioner also shall show that the waste does not exhibit any of the other characteristics defined in Sections R315-261-21 through 24 using any applicable methods prescribed therein;

(2) Based on a complete application, the Board shall determine, where it has a reasonable basis to believe that

factors, including additional constituents, other than those for which the waste was listed could cause the waste to be hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste. A waste which is so excluded, however, still may be a hazardous waste by operation of Sections R315-261-20 through 24.

(d) If the waste is listed with code "T" in Sections R315-2611-30 through 35,

(1) The petitioner shall demonstrate that the waste:

(i) Does not contain the constituent or constituents, as defined in appendix VII of Rule R315-261, that caused the waste to be listed; or

(ii) Although containing one or more of the hazardous constituents, as defined in appendix VII of Rule R315-261, that caused the waste to be listed, does not meet the criterion of Subsection R315-261-11(a)(3) when considering the factors in Subsections R315-261-11(a)(3)(i) through (xi) under which the waste was listed as hazardous; and

(2) Based on a complete application, the Board shall determine, where it has a reasonable basis to believe that factors, including additional constituents, other than those for which the waste was listed could cause the waste to be a hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste; and

(3) The petitioner shall demonstrate that the waste does not exhibit any of the characteristics defined in Sections R315-261.21 Through 24 using any applicable methods prescribed therein;

(4) A waste which is so excluded, however, still may be a hazardous waste by operation of Sections R315-261-20 through 24.

(e) If the waste is listed with the code "H" in Sections R315-261-30 through 35,

(1) The petitioner shall demonstrate that the waste does not meet the criterion of Subsection R315-261-11(a)(2); and

(2) Based on a complete application, the Board shall determine, where it has a reasonable basis to believe that additional factors, including additional constituents, other than those for which the waste was listed could cause the waste to be a hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste; and

(3) The petitioner shall demonstrate that the waste does not exhibit any of the characteristics defined in Sections R315-261-21 through 24 using any applicable methods prescribed therein;

(4) A waste which is so excluded, however, still may be a hazardous waste by operation of Sections R315-261-20 through 24.

(f) Reserved.

(g) Reserved.

(h) Demonstration samples shall consist of enough representative samples, but in no case less than four samples, taken over a period of time sufficient to represent the variability or the uniformity of the waste.

(i) Each petition shall include, in addition to the information required by subsection R315-260-20(b):

(1) The name and address of the laboratory facility performing the sampling or tests of the waste;

(2) The names and qualifications of the persons sampling and testing the waste;

(3) The dates of sampling and testing;

(4) The location of the generating facility;

(5) A description of the manufacturing processes or other operations and feed materials producing the waste and an assessment of whether such processes, operations, or feed materials can or might produce a waste that is not covered by the demonstration;

(6) A description of the waste and an estimate of the average and maximum monthly and annual quantities of waste covered by the demonstration;

(7) Pertinent data on and discussion of the factors delineated in the respective criterion for listing a hazardous waste, where the demonstration is based on the factors in Subsection R315-261-11(a)(3);

(8) A description of the methodologies and equipment used to obtain the representative samples;

(9) A description of the sample handling and preparation techniques, including techniques used for extraction, containerization and preservation of the samples;

(10) A description of the tests performed, including results;

(11) The names and model numbers of the instruments used in performing the tests; and

(12) The following statement signed by the generator of the waste or his authorized representative:

(i) I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(j) After receiving a petition for an exclusion, the Board may request any additional information which the Board may reasonably require to evaluate the petition.

(k) An exclusion will only apply to the waste generated at the individual facility covered by the demonstration and will not apply to waste from any other facility.

(l) The Board may exclude only part of the waste for which the demonstration is submitted where it has reason to believe that variability of the waste justifies a partial exclusion.

(m) Petitioner may, alternatively, proceed under the provisions of 40 CFR 260.22 to have a particular waste delisted by EPA. In the event delisting is granted, the petitioner shall so notify the Board and the Director and the decision of EPA will be binding upon the Board and the Director unless, within 30 days after such notification, the Board specifically overrules the decision of EPA. In such event, the petitioner may petition the Board directly under Section R315-260-22 for the relief sought.

R315-260-23. Petitions to Amend Rule R315-273 to Include Additional Hazardous Wastes.

(a) Any person seeking to add a hazardous waste or a category of hazardous waste to the universal waste regulations of Rule R315-273 may petition for a regulatory amendment under Section R315-260-23 Section R315-260-20, and Sections R315-273-80 and 81.

(b) To be successful, the petitioner shall demonstrate to the satisfaction of the Board that regulation under the universal waste regulations of Rule R315-273: Is appropriate for the waste or category of waste; will improve management practices for the waste or category of waste; and will improve implementation of the hazardous waste program. The petition shall include the information required by Subsection R315-260-20(b). The petition should also address as many of the factors listed in Section R315-273-81 as are appropriate for the waste or category of waste addressed in the petition.

(c) The Board shall grant or deny a petition using the factors listed in Section R315-273-81. The decision shall be based on the weight of evidence showing that regulation under Rule R315-273 is appropriate for the waste or category of waste, will improve management practices for the waste or category of waste, and will improve implementation of the hazardous waste program.

(d) The Board may request additional information needed to evaluate the merits of the petition.

R315-260-30. Non-Waste Determinations and Removal from

Classification as a Solid Waste.

In accordance with the standards and criteria in Sections R315-260-31 and 34 and the procedures in Section R315-260-33, the Director may determine on a case-by-case basis that the following recycled materials are not solid wastes:

(a) Materials that are accumulated speculatively without sufficient amounts being recycled, as defined in Subsection R315-261-1(c)(8);

(b) Materials that are reclaimed and then reused within the original production process in which they were generated;

(c) Materials that have been reclaimed but must be reclaimed further before the materials are completely recovered;

(d) Hazardous secondary materials that are reclaimed in a continuous industrial process;

(e) Hazardous secondary materials that are indistinguishable in all relevant aspects from a product or intermediate; and

(f) Hazardous secondary materials that are transferred for reclamation under Subsection R315-261-4(a)(24) and are managed at a verified reclamation facility or intermediate facility where the management of the hazardous secondary materials is not addressed under a Part B permit or interim status standards.

R315-260-31. Standards and Criteria for Removal from Classification as a Solid Waste.

(a) The Director may grant requests for removal from classifying as a solid waste those materials that are accumulated speculatively without sufficient amounts being recycled if the applicant demonstrates that sufficient amounts of the material will be recycled or transferred for recycling in the following year. If removal is granted, it is valid only for the following year, but can be renewed, on an annual basis, by filing a new application. The Director's decision will be based on the following criteria:

(1) The manner in which the material is expected to be recycled, when the material is expected to be recycled, and whether this expected disposition is likely to occur, for example, because of past practice, market factors, the nature of the material, or contractual arrangements for recycling;

(2) The reason that the applicant has accumulated the material for one or more years without recycling 75 percent of the volume accumulated at the beginning of the year;

(3) The quantity of material already accumulated and the quantity expected to be generated and accumulated before the material is recycled;

(4) The extent to which the material is handled to minimize loss; and

(5) Other relevant factors.

(b) The Director may grant requests for removal from classifying as a solid waste those materials that are reclaimed and then reused as feedstock within the original production process in which the materials were generated if the reclamation operation is an essential part of the production process. This determination will be based on the following criteria:

(1) How economically viable the production process would be if it were to use virgin materials, rather than reclaimed materials;

(2) The extent to which the material is handled before reclamation to minimize loss;

(3) The time periods between generating the material and its reclamation, and between reclamation and return to the original primary production process;

(4) The location of the reclamation operation in relation to the production process;

(5) Whether the reclaimed material is used for the purpose for which it was originally produced when it is returned to the original process, and whether it is returned to the process in substantially its original form;

(6) Whether the person who generates the material also

reclaims it; and

(7) Other relevant factors.

(c) The Director may grant requests for removal from classifying as a solid waste those hazardous secondary materials that have been partially reclaimed, but must be reclaimed further before recovery is completed, if the partial reclamation has produced a commodity-like material. A determination that a partially-reclaimed material for which the change in classification is sought is commodity-like will be based on whether the hazardous secondary material is legitimately recycled as specified in Section R315-260-43 and on whether all of the following decision criteria are satisfied:

(1) Whether the degree of partial reclamation the material has undergone is substantial as demonstrated by using a partial reclamation process other than the process that generated the hazardous waste;

(2) Whether the partially reclaimed material has sufficient economic value that it will be purchased for further reclamation;

(3) Whether the partially-reclaimed material is a viable substitute for a product or intermediate produced from virgin or raw materials which is used in subsequent production steps;

(4) Whether there is a market for the partially-reclaimed material as demonstrated by known customer(s) who are further reclaiming the material, e.g., records of sales and/or contracts and evidence of subsequent use, such as bills of lading; and

(5) Whether the partially-reclaimed material is handled to minimize loss.

(d) The Director may grant requests for an removal from classification as a solid waste those hazardous secondary materials that are transferred for reclamation under Subsection R315-261-4(a)(24) and are managed at a verified reclamation facility or intermediate facility where the management of the hazardous secondary materials is not addressed under a Part B permit or interim status standards. The Director's decision will be based on the following criteria:

(1) The reclamation facility or intermediate facility shall demonstrate that the reclamation process for the hazardous secondary materials is legitimate pursuant to Section R315-260-43;

(2) The reclamation facility or intermediate facility shall satisfy the financial assurance condition in Subsection R315-261-4(a)(24)(vi)(F);

(3) The reclamation facility or intermediate facility shall not be subject to a formal enforcement action in the previous three years and not be classified as a significant non-complier, or shall provide credible evidence that the facility will manage the hazardous secondary materials properly. Credible evidence may include a demonstration that the facility has taken remedial steps to address the violations and prevent future violations, or that the violations are not relevant to the proper management of the hazardous secondary materials;

(4) The intermediate or reclamation facility shall have the equipment and trained personnel needed to safely manage the hazardous secondary material and shall meet emergency preparedness and response requirements under Sections R315-261-400 through 420;

(5) If residuals are generated from the reclamation of the excluded hazardous secondary materials, the reclamation facility shall have the permits required, if any, to manage the residuals, have a contract with an appropriately permitted facility to dispose of the residuals or present credible evidence that the residuals will be managed in a manner that is protective of human health and the environment, and

(6) The intermediate or reclamation facility shall address the potential for risk to proximate populations from unpermitted releases of the hazardous secondary material to the environment; i.e., releases that are not covered by a permit, such as a permit to discharge to water or air; which may include, but are not limited to, potential releases through surface transport by

precipitation runoff, releases to soil and groundwater, wind-blown dust, fugitive air emissions, and catastrophic unit failures, and shall include consideration of potential cumulative risks from other nearby potential stressors.

R315-260-32. Reclassification as a Boiler.

In accordance with the standards and criteria in the definition of a boiler found in Section R315-260-10, and the procedures in Section R315-260-33, the Board may determine on a case-by-case basis that certain enclosed devices using controlled flame combustion are boilers, even though they do not otherwise meet the definition of boiler contained in Subsection R315-260-10, after considering the following criteria:

- (a) The extent to which the unit has provisions for recovering and exporting thermal energy in the form of steam, heated fluids, or heated gases; and
- (b) The extent to which the combustion chamber and energy recovery equipment are of integral design; and
- (c) The efficiency of energy recovery, calculated in terms of the recovered energy compared with the thermal value of the fuel; and
- (d) The extent to which exported energy is utilized; and
- (e) The extent to which the device is in common and customary use as a "boiler" functioning primarily to produce steam, heated fluids, or heated gases; and
- (f) Other factors, as appropriate.

R315-260-33. Procedures for Removal from Classification as a Solid Waste, for Reclassification as a Boiler, or for Non-waste Determinations.

The Director shall use the following procedures in evaluating applications for removal from classification as a solid waste, applications to classify particular enclosed controlled flame combustion devices as boilers, or applications for non-waste determinations.

(a) The applicant shall apply to the Director for the removal, reclassification, or non-waste determination. The application shall address the relevant criteria contained in Sections R315-260-31, 32, or 34, as applicable.

(b) The Director shall evaluate the application and issue a draft notice tentatively granting or denying the application. Notification of this tentative decision shall be provided by newspaper advertisement or radio broadcast in the locality where the facility requesting the removal, reclassification, or non-waste determination is located. The Director shall accept comment on the tentative decision for 30 days, and may also hold a public hearing upon request or at the Director's discretion. The Director shall issue a final decision after receipt of comments and after the hearing, if any.

(c) In the event of a change in circumstances that affect how a hazardous secondary material meets the relevant criteria contained in Sections R315-260-31 or 34 upon which a removal determination or non-waste determination has been based, the applicant shall send a description of the change in circumstances to the Director. The Director may issue a determination that the hazardous secondary material continues to meet the relevant criteria of the removal determination or non-waste determination or may require the facility to re-apply for the removal determination or non-waste determination.

(d) Removal determinations and non-waste determinations shall be effective for a fixed term not to exceed ten years. No later than six months prior to the end of this term, facilities shall re-apply for a removal determination or non-waste determination. If a facility re-applies for a removal determination or non-waste determination within six months, the facility may continue to operate under an expired removal determination or non-waste determination until receiving a decision on their re-application from the Director.

(e) Facilities receiving a removal determination or non-waste determination shall provide notification as required by Section R315-260-42.

R315-260-34. Standards and Criteria for Non-Waste Determinations.

(a) An applicant may apply to the Director for a formal determination that a hazardous secondary material is not discarded and therefore not a solid waste. The determinations will be based on the criteria contained in Subsections R315-260-34(b) or (c), as applicable. If an application is denied, the hazardous secondary material might still be eligible for a solid waste variance or exclusion.

(b) The Director may grant a non-waste determination for hazardous secondary material which is reclaimed in a continuous industrial process if the applicant demonstrates that the hazardous secondary material is a part of the production process and is not discarded. The determination will be based on whether the hazardous secondary material is legitimately recycled as specified in Section R315-260-43 and on the following criteria:

(1) The extent that the management of the hazardous secondary material is part of the continuous primary production process and is not waste treatment;

(2) Whether the capacity of the production process would use the hazardous secondary material in a reasonable time frame and ensure that the hazardous secondary material will not be abandoned, for example, based on past practices, market factors, the nature of the hazardous secondary material, or any contractual arrangements;

(3) Whether the hazardous constituents in the hazardous secondary material are reclaimed rather than released to the air, water or land at significantly higher levels from either a statistical or from a health and environmental risk perspective than would otherwise be released by the production process; and

(4) Other relevant factors that demonstrate the hazardous secondary material is not discarded, including why the hazardous secondary material cannot meet, or should not have to meet, the conditions of an exclusion under Sections R315-261-2 or 4.

(c) The Director may grant a non-waste determination for hazardous secondary material which is indistinguishable in all relevant aspects from a product or intermediate if the applicant demonstrates that the hazardous secondary material is comparable to a product or intermediate and is not discarded. The determination will be based on whether the hazardous secondary material is legitimately recycled as specified in Section R315-260-43 and on the following criteria:

(1) Whether market participants treat the hazardous secondary material as a product or intermediate rather than a waste, for example, based on the current positive value of the hazardous secondary material, stability of demand, or any contractual arrangements;

(2) Whether the chemical and physical identity of the hazardous secondary material is comparable to commercial products or intermediates;

(3) Whether the capacity of the market would use the hazardous secondary material in a reasonable time frame and ensure that the hazardous secondary material will not be abandoned, for example, based on past practices, market factors, the nature of the hazardous secondary material, or any contractual arrangements;

(4) Whether the hazardous constituents in the hazardous secondary material are reclaimed rather than released to the air, water or land at significantly higher levels from either a statistical or from a health and environmental risk perspective than would otherwise be released by the production process; and

(5) Other relevant factors that demonstrate the hazardous secondary material is not discarded, including why the

hazardous secondary material cannot meet, or should not have to meet, the conditions of an exclusion under Sections R315-261-2 or 4.

R315-260-40. Additional Regulation of Certain Hazardous Waste Recycling Activities on a Case-by-Case Basis.

(a) The Director may decide on a case-by-case basis that persons accumulating or storing the recyclable materials described in Subsection R315-261-6(a)(2)(iii) should be regulated under Subsection R315-261-6(b) and (c). The basis for this decision is that the materials are being accumulated or stored in a manner that does not protect human health and the environment because the materials or their toxic constituents have not been adequately contained, or because the materials being accumulated or stored together are incompatible. In making this decision, the Director shall consider the following factors:

- (1) The types of materials accumulated or stored and the amounts accumulated or stored;
 - (2) The method of accumulation or storage;
 - (3) The length of time the materials have been accumulated or stored before being reclaimed;
 - (4) Whether any contaminants are being released into the environment, or are likely to be so released; and
 - (5) Other relevant factors.
- (2) The procedures for this decision are set forth in R315-260-41.

R315-260-41. Procedures for Case-by-Case Regulation of Hazardous Waste Recycling Activities.

The Director shall use the following procedures when determining whether to regulate hazardous waste recycling activities described in Subsection R315-261-6(a)(2)(iii) under the provisions of Subsection R315-261-6(b) and (c), rather than under the provisions of Section R315-266-70.

(a) If a generator is accumulating the waste, the Director shall issue a notice setting forth the factual basis for the decision and stating that the person shall comply with the applicable requirements of Sections R315-262-10 through 12, R315-262-30 through 34, R315-262-40 through 44, and R315-262-50 through 58. The notice shall become final within 30 days, unless a request for agency action is made under the requirements of the Administrative Procedures Act.

(b) If the person is accumulating the recyclable material as a storage facility, the notice will state that the person shall obtain a permit in accordance with all applicable provisions of Rule R315-270 and 124. The owner or operator of the facility shall apply for a permit within no less than 60 days and no more than six months of notice, as specified in the notice. If the owner or operator of the facility wishes to challenge the Director's decision, he may do so in accordance with the Administrative Procedures Act.

R315-260-42. Notification Requirement for Hazardous Secondary Materials.

(a) Facilities managing hazardous secondary materials under Subsections R315-260-30, or Subsections R315-261-4(a)(23), (24), or (27) shall send a notification prior to operating under the exclusion(s) and by March 1 of each even numbered year thereafter to the Director using EPA Form 8700-12 that includes the following information:

- (1) The name, address, and EPA ID number, if applicable, of the facility;
- (2) The name and telephone number of a contact person;
- (3) The NAICS code of the facility;
- (4) The regulation under which the hazardous secondary materials shall be managed;
- (5) When the facility began or expects to begin managing the hazardous secondary materials in accordance with the

regulation;

(6) A list of hazardous secondary materials that shall be managed according to the regulation, reported as the EPA hazardous waste numbers that would apply if the hazardous secondary materials were managed as hazardous wastes;

(7) For each hazardous secondary material, whether the hazardous secondary material, or any portion thereof, will be managed in a land-based unit;

(8) The quantity of each hazardous secondary material to be managed annually; and

(9) The certification, included in EPA Form 8700-12, signed and dated by an authorized representative of the facility.

(b) If a facility managing hazardous secondary materials has submitted a notification, but then subsequently stops managing hazardous secondary materials in accordance with the regulation(s) listed above, the facility shall notify the Director within thirty days using EPA Form 8700-12. For purposes of Section R315-260-42, a facility has stopped managing hazardous secondary materials if the facility no longer generates, manages and/or reclaims hazardous secondary materials under the regulation(s) above and does not expect to manage any amount of hazardous secondary materials for at least 1 year.

R315-260-43. Legitimate Recycling of Hazardous Secondary Materials.

(a) Recycling of hazardous secondary materials for the purpose of the exclusions or exemptions from the hazardous waste regulations shall be legitimate. Hazardous secondary material that is not legitimately recycled is discarded material and is a solid waste. In determining if their recycling is legitimate, persons shall address all the requirements of Subsections R315-260-43(a)(1) through (4).

(1) Legitimate recycling shall involve a hazardous secondary material that provides a useful contribution to the recycling process or to a product or intermediate of the recycling process. The hazardous secondary material provides a useful contribution if it:

- (i) Contributes valuable ingredients to a product or intermediate; or
- (ii) Replaces a catalyst or carrier in the recycling process; or
- (iii) Is the source of a valuable constituent recovered in the recycling process; or
- (iv) Is recovered or regenerated by the recycling process; or
- (v) Is used as an effective substitute for a commercial product.

(2) The recycling process shall produce a valuable product or intermediate. The product or intermediate is valuable if it is:

- (i) Sold to a third party; or
- (ii) Used by the recycler or the generator as an effective substitute for a commercial product or as an ingredient or intermediate in an industrial process.

(3) The generator and the recycler shall manage the hazardous secondary material as a valuable commodity when it is under their control. Where there is an analogous raw material, the hazardous secondary material shall be managed, at a minimum, in a manner consistent with the management of the raw material or in an equally protective manner. Where there is no analogous raw material, the hazardous secondary material shall be contained. Hazardous secondary materials that are released to the environment and are not recovered immediately are discarded.

(4) The product of the recycling process shall be comparable to a legitimate product or intermediate:

- (i) Where there is an analogous product or intermediate, the product of the recycling process is comparable to a legitimate product or intermediate if:

(A) The product of the recycling process does not exhibit a hazardous characteristic, as defined in Sections R315-261-20 through 24, that analogous products do not exhibit, and

(B) The concentrations of any hazardous constituents found in appendix VIII of Rule R315-261 that are in the product or intermediate are at levels that are comparable to or lower than those found in analogous products or at levels that meet widely-recognized commodity standards and specifications, in the case where the commodity standards and specifications include levels that specifically address those hazardous constituents.

(ii) Where there is no analogous product, the product of the recycling process is comparable to a legitimate product or intermediate if:

(A) The product of the recycling process is a commodity that meets widely recognized commodity standards and specifications, e.g., commodity specification grades for common metals, or

(B) The hazardous secondary materials being recycled are returned to the original process or processes from which they were generated to be reused, e.g., closed loop recycling.

(iii) If the product of the recycling process has levels of hazardous constituents that are not comparable to or unable to be compared to a legitimate product or intermediate per Subsection R315-260-43(a)(4)(i) or (ii), the recycling still may be shown to be legitimate, if it meets the following specified requirements. The person performing the recycling shall conduct the necessary assessment and prepare documentation showing why the recycling is, in fact, still legitimate. The recycling can be shown to be legitimate based on lack of exposure from toxics in the product, lack of the bioavailability of the toxics in the product, or other relevant considerations which show that the recycled product does not contain levels of hazardous constituents that pose a significant human health or environmental risk. The documentation shall include a certification statement that the recycling is legitimate and shall be maintained on-site for three years after the recycling operation has ceased. The person performing the recycling shall notify the Director of this activity using EPA Form 8700-12.

**KEY: hazardous waste
April 15, 2016**

19-1-301

19-6-105

19-6-106

63G-4-201 through 63G-4-205

63G-4-503

R315. Environmental Quality, Waste Management and Radiation Control, Waste Management.

R315-261. General Requirements - Identification and Listing of Hazardous Waste.

R315-261-1. Purpose and Scope.

(a) This rule identifies those solid wastes which are subject to regulation as hazardous wastes under Rules R315-262 through 265, 268, 270, and 124 and which are subject to the notification requirements of these rules.

(1) Sections R315-261-1 through 9 define the terms "solid waste" and "hazardous waste", identify those wastes which are excluded from regulation under Rules R315-262 through R315-266, R315-268 and R315-270 and establishes special management requirements for hazardous waste produced by conditionally exempt small quantity generators and hazardous waste which is recycled.

(2) Sections R315-261-10 and 11 set forth the criteria used to identify characteristics of hazardous waste and to list particular hazardous wastes.

(3) Sections R315-261-20 through 24 identify characteristics of hazardous waste.

(4) Sections R315-261-30 through 35 list particular hazardous wastes.

(b)(1) The definition of solid waste contained in this rule applies only to wastes that also are hazardous for purposes of the rules implementing Title 19 Chapter 6. For example, it does not apply to materials such as non-hazardous scrap, paper, textiles, or rubber that are not otherwise hazardous wastes and that are recycled.

(2) Rule R315-261 identifies only some of the materials which are solid wastes and hazardous wastes under the Utah Solid and Hazardous Waste Act. A material which is not defined as a solid waste in Rule R315-261, or is not a hazardous waste identified or listed in Rule R315-261, is still a solid waste and a hazardous waste for purposes of these sections if:

(i) In the case of section 19-6-109, the Director has reason to believe that the material may be a solid waste within the meaning of Subsection 19-6-102(13) and a hazardous waste within the meaning of Subsection 19-6-102(7) or

(ii) In the case of section 19-6-115, the material is presenting an imminent and substantial danger to human health or the environment.

(c) For the purposes of Sections R315-261-2 and 261-6:

(1) A "spent material" is any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing;

(2) "Sludge" has the same meaning used in Section R315-260-10;

(3) A "by-product" is a material that is not one of the primary products of a production process and is not solely or separately produced by the production process. Examples are process residues such as slags or distillation column bottoms. The term does not include a co-product that is produced for the general public's use and is ordinarily used in the form it is produced by the process.

(4) A material is "reclaimed" if it is processed to recover a usable product, or if it is regenerated. Examples are recovery of lead values from spent batteries and regeneration of spent solvents. In addition, for purposes of Subsections R315-261-4(a)(23), and (24) smelting, melting and refining furnaces are considered to be solely engaged in metals reclamation if the metal recovery from the hazardous secondary materials meets the same requirements as those specified for metals recovery from hazardous waste found in Subsection R315-266-100(d)(1) through (3), and if the residuals meet the requirements specified in Section R315-266-112.

(5) A material is "used or reused" if it is either:

(i) Employed as an ingredient, including use as an intermediate, in an industrial process to make a product, for

example, distillation bottoms from one process used as feedstock in another process. However, a material will not satisfy this condition if distinct components of the material are recovered as separate end products, as when metals are recovered from metal-containing secondary materials; or

(ii) Employed in a particular function or application as an effective substitute for a commercial product, for example, spent pickle liquor used as phosphorous precipitant and sludge conditioner in wastewater treatment.

(6) "Scrap metal" is bits and pieces of metal, parts for example bars, turnings, rods, sheets, wire, or metal pieces that may be combined together with bolts or soldering, for example radiators, scrap automobiles, railroad box cars, which when worn or superfluous can be recycled.

(7) A material is "recycled" if it is used, reused, or reclaimed.

(8) A material is "accumulated speculatively" if it is accumulated before being recycled. A material is not accumulated speculatively, however, if the person accumulating it can show that the material is potentially recyclable and has a feasible means of being recycled; and that during the calendar year, commencing on January 1, the amount of material that is recycled, or transferred to a different site for recycling, equals at least 75 percent by weight or volume of the amount of that material accumulated at the beginning of the period. Materials shall be placed in a storage unit with a label indicating the first date that the material began to be accumulated. If placing a label on the storage unit is not practicable, the accumulation period shall be documented through an inventory log or other appropriate method. In calculating the percentage of turnover, the 75 percent requirement is to be applied to each material of the same type, e.g., slags from a single smelting process, that is recycled in the same way, i.e., from which the same material is recovered or that is used in the same way. Materials accumulating in units that would be exempt from regulation under Subsection R315-261-4(c) are not to be included in making the calculation. Materials that are already defined as solid wastes also are not to be included in making the calculation. Materials are no longer in this category once they are removed from accumulation for recycling, however.

(9) "Excluded scrap metal" is processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal.

(10) "Processed scrap metal" is scrap metal which has been manually or physically altered to either separate it into distinct materials to enhance economic value or to improve the handling of materials. Processed scrap metal includes, but is not limited to scrap metal which has been baled, shredded, sheared, chopped, crushed, flattened, cut, melted, or separated by metal type, i.e., sorted, and, fines, drosses and related materials which have been agglomerated. Note: shredded circuit boards being sent for recycling are not considered processed scrap metal. They are covered under the exclusion from the definition of solid waste for shredded circuit boards being recycled Subsection R315-261-4(a)(14).

(11) "Home scrap metal" is scrap metal as generated by steel mills, foundries, and refineries such as turnings, cuttings, punchings, and borings.

(12) "Prompt scrap metal" is scrap metal as generated by the metal working/fabrication industries and includes such scrap metal as turnings, cuttings, punchings, and borings. Prompt scrap is also known as industrial or new scrap metal.

R315-261-2. Definition of Solid Waste.

(a)(1) A solid waste is any discarded material that is not excluded by Subsection R315-261-4(a) or that is not excluded by variance granted under Sections R315-260-30 and R315-260-31 or that is not excluded by a non-waste determination under Sections R315-260-30 and R315-260-34.

- (2)(i) A discarded material is any material which is:
 - (A) Abandoned, as explained in Subsection R315-261-2(b); or
 - (B) Recycled, as explained in Subsection R315-261-2(c); or
 - (C) Considered inherently waste-like, as explained in Subsection R315-261-2(d).
- (b) Materials are solid waste if they are abandoned by being:
 - (1) Disposed of; or
 - (2) Burned or incinerated; or
 - (3) Accumulated, stored, or treated, but not recycled, before or in lieu of being abandoned by being disposed of, burned, or incinerated; or
 - (4) Sham recycled, as explained in Subsection R315-261-2(g)

(c) Materials are solid wastes if they are recycled-or accumulated, stored, or treated before recycling-as specified in Subsections R315-261-2(c)(1) through (4).

- (1) Used in a manner constituting disposal.
 - (i) Materials noted with a "*" in Column 1 of Table 1 are solid wastes when they are:
 - (A) Applied to or placed on the land in a manner that constitutes disposal; or
 - (B) Used to produce products that are applied to or placed on the land or are otherwise contained in products that are applied to or placed on the land (in which cases the product itself remains a solid waste).
 - (ii) However, commercial chemical products listed in Section R315-261-33 are not solid wastes if they are applied to the land and that is their ordinary manner of use.
 - (2) Burning for energy recovery.
 - (i) Materials noted with a "*" in column 2 of Table 1 are solid wastes when they are:
 - (A) Burned to recover energy;
 - (B) Used to produce a fuel or are otherwise contained in fuels, in which cases the fuel itself remains a solid waste.
 - (ii) However, commercial chemical products listed in Section R315-261-33 are not solid wastes if they are themselves fuels.
 - (3) Reclaimed. Materials noted with a "-" in column 3 of Table 1 are not solid wastes when reclaimed. Materials noted with an "*" in column 3 of Table 1 are solid wastes when reclaimed unless they meet the requirements of Subsections R315-261-4(a)(17), or R315-261-4(a)(23), R315-261-4(a)(24) or R35-261-4(a)(27).
 - (4) Accumulated speculatively. Materials noted with a "*" in column 4 of Table 1 are solid wastes when accumulated speculatively.

TABLE 1

	Use Constituting Disposal 261-2(c)(1)	Energy recovery/fuel 261-2(c)(2)	Reclamation except as provided in 261-4(a)(17), 261-4(a)(23), 261-4(a)(24) or 261-4(a)(27)	Speculative accumulation 261-2(c)(4)
	1	2	3	4
Spent Materials	(*)	(*)	(*)	(*)
Sludges (listed in 261-31 or 261-32)	(*)	(*)	(*)	(*)
Sludges exhibiting a characteristic of hazardous waste	(*)	(*)	-	(*)
By-products	(*)	(*)	(*)	(*)

(listed in 261-31 or 261-32

By-products exhibiting a characteristic of hazardous waste	(*)	(*)	-	(*)
Commercial chemical products listed in 261-33	(*)	(*)	-	-
Scrap metal that is not excluded under 261-4(a)(13)	(*)	(*)	(*)	(*)

Note 1: All rule references in Table 1 are to R315.
 Note 2: The terms "spent materials," "sludges," "by-products," and "scrap metal" and "processed scrap metal" are defined in Section R315-261-1.

(d) Inherently waste-like materials. The following materials are solid wastes when they are recycled in any manner:

- (1) Hazardous Waste Nos. F020; F021, unless used as an ingredient to make a product at the site of generation; F022; F023; F026; and F028.
- (2) Secondary materials fed to a halogen acid furnace that exhibit a characteristic of a hazardous waste or are listed as a hazardous waste as defined in Sections R315-261-20 through 24 and 30 through 35, except for brominated material that meets the following criteria:
 - (i) The material shall contain a bromine concentration of at least 45%; and
 - (ii) The material shall contain less than a total of 1% of toxic organic compounds listed in Rule R315-261 appendix VIII; and
 - (iii) The material is processed continually on-site in the halogen acid furnace via direct conveyance, hard piping.
- (3) The Board shall use the following criteria to add wastes to the list found in Table 1 of Section R315-261-2:
 - (i)(A) The materials are ordinarily disposed of, burned, or incinerated; or
 - (B) The materials contain toxic constituents listed in appendix VIII of Rule R315-261 and these constituents are not ordinarily found in raw materials or products for which the materials substitute (or are found in raw materials or products in smaller concentrations) and are not used or reused during the recycling process; and
 - (ii) The material may pose a substantial hazard to human health and the environment when recycled.
- (e) Materials that are not solid waste when recycled.

(1) Materials are not solid wastes when they can be shown to be recycled by being:

- (i) Used or reused as ingredients in an industrial process to make a product, provided the materials are not being reclaimed; or
- (ii) Used or reused as effective substitutes for commercial products; or
- (iii) Returned to the original process from which they are generated, without first being reclaimed or land disposed. The material shall be returned as a substitute for feedstock materials. In cases where the original process to which the material is returned is a secondary process, the materials shall be managed such that there is no placement on the land. In cases where the materials are generated and reclaimed within the primary mineral processing industry, the conditions of the exclusion found at Subsection R315-261-4(a)(17) apply rather than Subsection R315-261-2(e)(1)(iii).
- (2) The following materials are solid wastes, even if the recycling involves use, reuse, or return to the original process described in Subsections R315-261-2(e)(1)(i) through (iii):

- (i) Materials used in a manner constituting disposal, or used to produce products that are applied to the land; or
- (ii) Materials burned for energy recovery, used to produce a fuel, or contained in fuels; or
- (iii) Materials accumulated speculatively; or
- (iv) Materials listed in Subsections R315-261-2(d)(1) and (d)(2).
- (f) Documentation of claims that materials are not solid wastes or are conditionally exempt from regulation. Respondents in actions to enforce rules implementing Sections 19-6-101 through 125 who raise a claim that a certain material is not a solid waste, or is conditionally exempt from regulation, shall demonstrate that there is a known market or disposition for the material, and that they meet the terms of the exclusion or exemption. In doing so, they shall provide appropriate documentation, such as contracts showing that a second person uses the material as an ingredient in a production process, to demonstrate that the material is not a waste, or is exempt from regulation. In addition, owners or operators of facilities claiming that they actually are recycling materials shall show that they have the necessary equipment to do so.
- (g) Sham recycling. A hazardous secondary material found to be sham recycled is considered discarded and a solid waste. Sham recycling is recycling that is not legitimate recycling as defined in Section R315-260-43.

R315-261-3. Definition of Hazardous Waste.

(a) A solid waste, as defined in Section R315-261-2, is a hazardous waste if:

(1) It is not excluded from regulation as a hazardous waste under Subsection R315-261-4(b); and

(2) It meets any of the following criteria:

(i) It exhibits any of the characteristics of hazardous waste identified in Sections R315-261-20 through 24. However, any mixture of a waste from the extraction, beneficiation, and processing of ores and minerals excluded under Subsection R315-261-4(b)(7) and any other solid waste exhibiting a characteristic of hazardous waste under Sections R315-261-20 through 24 is a hazardous waste only if it exhibits a characteristic that would not have been exhibited by the excluded waste alone if such mixture had not occurred, or if it continues to exhibit any of the characteristics exhibited by the non-excluded wastes prior to mixture. Further, for the purposes of applying the Toxicity Characteristic to such mixtures, the mixture is also a hazardous waste if it exceeds the maximum concentration for any contaminant listed in table 1 to Section R315-261-24 that would not have been exceeded by the excluded waste alone if the mixture had not occurred or if it continues to exceed the maximum concentration for any contaminant exceeded by the nonexempt waste prior to mixture.

(ii) It is listed in Sections R315-261-30 through 35 and has not been excluded from the lists in Sections R315-261-30 through 35 under Sections R315-260-.20 and R315-260-22.

(iii) (Reserved)

(iv) It is a mixture of solid waste and one or more hazardous wastes listed in Sections R315-261-30 through 35 and has not been excluded from Subsection R315-261-3(a)(2) under Sections R315-260-20 and R315-260-22, Subsection R315-261-3(g), or Subsection R315-261-3(h); however, the following mixtures of solid wastes and hazardous wastes listed in Sections R315-261-30 through 35 are not hazardous wastes, except by application of Subsections R315-261-3(a)(2)(i) or (ii), if the generator can demonstrate that the mixture consists of wastewater the discharge of which is subject to regulation under either section 402 or section 307(b) of the Clean Water Act, including wastewater at facilities which have eliminated the discharge of wastewater, and;

(A) One or more of the following spent solvents listed in Section R315-261-31: benzene, carbon tetrachloride,

tetrachloroethylene, trichloroethylene or the scrubber waters derived-from the combustion of these spent solvents-Provided, That the maximum total weekly usage of these solvents, other than the amounts that can be demonstrated not to be discharged to wastewater, divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed 1 part per million, or the total measured concentration of these solvents entering the headworks of the facility's wastewater treatment system, at facilities subject to regulation under the Utah Air Conservation Act, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions, does not exceed 1 part per million on an average weekly basis. Any facility that uses benzene as a solvent and claims this exemption shall use an aerated biological wastewater treatment system and shall use only lined surface impoundments or tanks prior to secondary clarification in the wastewater treatment system. Facilities that choose to measure concentration levels shall file a copy of their sampling and analysis plan with the Director. A facility shall file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan shall include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once they receive confirmation that the sampling and analysis plan has been received by the Director. The Director may reject the sampling and analysis plan if the Director finds that, the sampling and analysis plan fails to include the above information; or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the Director rejects the sampling and analysis plan or if the Director finds that the facility is not following the sampling and analysis plan, the Director shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or

(B) One or more of the following spent solvents listed in Section R315-261-31: methylene chloride, 1,1,1-trichloroethane, chlorobenzene, o-dichlorobenzene, cresols, cresylic acid, nitrobenzene, toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, spent chlorofluorocarbon solvents, 2-ethoxyethanol, or the scrubber waters derived-from the combustion of these spent solvents-Provided That the maximum total weekly usage of these solvents, other than the amounts that can be demonstrated not to be discharged to wastewater, divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed 25 parts per million, or the total measured concentration of these solvents entering the headworks of the facility's wastewater treatment system; at facilities subject to regulation under the Utah Air Conservation Act, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions; does not exceed 25 parts per million on an average weekly basis. Facilities that choose to measure concentration levels shall file a copy of their sampling and analysis plan with the Director. A facility shall file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan shall include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once they receive confirmation that the sampling and analysis plan has been received by the Director. The Director may reject the sampling and analysis plan if the Director finds that, the sampling and analysis plan fails to include the above information; or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals

accurately. If the Director rejects the sampling and analysis plan or if the Director finds that the facility is not following the sampling and analysis plan, the Director shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or

(C) One of the following wastes listed in Section R315-261-32, provided that the wastes are discharged to the refinery oil recovery sewer before primary oil/water/solids separation-heat exchanger bundle cleaning sludge from the petroleum refining industry, EPA Hazardous Waste No. K050; crude oil storage tank sediment from petroleum refining operations, EPA Hazardous Waste No. K169; clarified slurry oil tank sediment and/or in-line filter/separation solids from petroleum refining operations, EPA Hazardous Waste No. K170; spent hydrotreating catalyst, EPA Hazardous Waste No. K171; and spent hydrorefining catalyst, EPA Hazardous Waste No. K172; or

(D) A discarded hazardous waste, commercial chemical product, or chemical intermediate listed in Sections R315-261-31 through R315-261-33, arising from de minimis losses of these materials. For purposes of this Subsection R315-261-3(a)(2)(iv)(D), de minimis losses are inadvertent releases to a wastewater treatment system, including those from normal material handling operations, e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials; minor leaks of process equipment, storage tanks or containers; leaks from well maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and rinsate from empty containers or from containers that are rendered empty by that rinsing. Any manufacturing facility that claims an exemption for de minimis quantities of wastes listed in Sections R315-261-31 through R315-261-32, or any nonmanufacturing facility that claims an exemption for de minimis quantities of wastes listed in Sections R315-261-30 through 35 shall either have eliminated the discharge of wastewaters or have included in its Clean Water Act permit application or submission to its pretreatment control authority the constituents for which each waste was listed in Rule R315-261 appendix VII; and the constituents in the table "Treatment Standards for Hazardous Wastes" in Section R315-268-40 for which each waste has a treatment standard (i.e., Land Disposal Restriction constituents). A facility is eligible to claim the exemption once the permit writer or control authority has been notified of possible de minimis releases via the Clean Water Act permit application or the pretreatment control authority submission. A copy of the Clean Water permit application or the submission to the pretreatment control authority shall be placed in the facility's on-site files; or

(E) Wastewater resulting from laboratory operations containing toxic (T) wastes listed in Sections R315-261-30 through 35. Provided, That the annualized average flow of laboratory wastewater does not exceed one percent of total wastewater flow into the headworks of the facility's wastewater treatment or pre-treatment system or provided the wastes, combined annualized average concentration does not exceed one part per million in the headworks of the facility's wastewater treatment or pre-treatment facility. Toxic wastes used in laboratories that are demonstrated not to be discharged to wastewater are not to be included in this calculation; or

(F) One or more of the following wastes listed in Section R315-261.32: wastewaters from the production of carbamates and carbamoyl oximes, EPA Hazardous Waste No. K157 - Provided that the maximum weekly usage of formaldehyde, methyl chloride, methylene chloride, and triethylamine, including all amounts that cannot be demonstrated to be reacted in the process, destroyed through treatment, or is recovered, i.e., what is discharged or volatilized, divided by the average weekly

flow of process wastewater prior to any dilution into the headworks of the facility's wastewater treatment system does not exceed a total of 5 parts per million by weight or the total measured concentration of these chemicals entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Utah Air Conservation Act, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions), does not exceed 5 parts per million on an average weekly basis. Facilities that choose to measure concentration levels shall file copy of their sampling and analysis plan with the Director. A facility shall file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan shall include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once they receive confirmation that the sampling and analysis plan has been received by the Director. The Director may reject the sampling and analysis plan if the Director finds that, the sampling and analysis plan fails to include the above information; or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the Director rejects the sampling and analysis plan or if the Director finds that the facility is not following the sampling and analysis plan, the Director shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or

(G) Wastewaters derived-from the treatment of one or more of the following wastes listed in Section R315-261-32: organic waste, including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates, from the production of carbamates and carbamoyl oximes, EPA Hazardous Waste No. K156. Provided, that the maximum concentration of formaldehyde, methyl chloride, methylene chloride, and triethylamine prior to any dilutions into the headworks of the facility's wastewater treatment system does not exceed a total of 5 milligrams per liter or the total measured concentration of these chemicals entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Utah Air Conservation Act, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions), does not exceed 5 milligrams per liter on an average weekly basis. Facilities that choose to measure concentration levels shall file copy of their sampling and analysis plan with the Director. A facility shall file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan shall include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once they receive confirmation that the sampling and analysis plan has been received by the Director. The Director may reject the sampling and analysis plan if the Director finds that, the sampling and analysis plan fails to include the above information; or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the Director rejects the sampling and analysis plan or if the Director finds that the facility is not following the sampling and analysis plan, the Director shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected.

(v) Rebuttable presumption for used oil. Used oil containing more than 1000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in Sections R315-261-30 through 35. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous

waste; for example, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix VIII of Rule R315-261.

(A) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins, if they are processed, through a tolling agreement, to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.

(B) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

(b) A solid waste which is not excluded from regulation under Subsection R315-261-3(a)(1) becomes a hazardous waste when any of the following events occur:

(1) In the case of a waste listed in Sections R315-261-30 through 35, when the waste first meets the listing description set forth in R315-261-30 through 35.

(2) In the case of a mixture of solid waste and one or more listed hazardous wastes, when a hazardous waste listed in R315-261-30 through 35 is first added to the solid waste.

(3) In the case of any other waste, including a waste mixture, when the waste exhibits any of the characteristics identified in Sections R315-261-20 through 24.

(c) Unless and until it meets the criteria of Subsection R315-261-3(d):

(1) A hazardous waste shall remain a hazardous waste.

(2)(i) Except as otherwise provided in Subsections R315-261-3(c)(2)(ii), or (g), any solid waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash emission control dust, or leachate, but not including precipitation run-off, is a hazardous waste. However, materials that are reclaimed from solid wastes and that are used beneficially are not solid wastes and hence are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.

(ii) The following solid wastes are not hazardous even though they are generated from the treatment, storage, or disposal of a hazardous waste, unless they exhibit one or more of the characteristics of hazardous waste:

(A) Waste pickle liquor sludge generated by lime stabilization of spent pickle liquor from the iron and steel industry, SIC Codes 331 and 332.

(B) Waste from burning any of the materials exempted from regulation by Subsection R315-261-6(a)(3)(iii) and (iv).

(C)(I) Nonwastewater residues, such as slag, resulting from high temperature metals recovery processing of K061, K062 or F006 waste, in units identified as rotary kilns, flame reactors, electric furnaces, plasma arc furnaces, slag reactors, rotary hearth furnace/electric furnace combinations or industrial furnaces, as defined in Section R315-260-10, that are disposed in solid waste landfills regulated under Rules R315-301 through R315-320, provided that these residues meet the generic exclusion levels identified in the tables below for all constituents, and exhibit no characteristics of hazardous waste. Testing requirements shall be incorporated in a facility's waste analysis plan or a generator's self-implementing waste analysis plan; at a minimum, composite samples of residues shall be collected and analyzed quarterly and/or when the process or operation generating the waste changes. Persons claiming this exclusion in an enforcement action shall have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements.

TABLE

Constituent Maximum for any single composite sample - TCLP (mg/l)

Generic exclusion levels for K061 and K062 nonwastewater high temperature metals recovery residues

Antimony	0.10
Arsenic	0.50
Barium	7.6
Beryllium	0.010
Cadmium	0.050
Chromium (total)	0.33
Lead	0.15
Mercury	0.009
Nickel	1.0
Selenium	0.16
Silver	0.30
Thallium	0.020
Zinc	70

Generic exclusion levels for F006 nonwastewater high temperature metals recovery residues

Antimony	0.10
Arsenic	0.50
Barium	7.6
Beryllium	0.010
Cadmium	0.050
Chromium (total)	0.33
Cyanide (total) (mg/kg)	1.8
Lead	0.15
Mercury	0.009
Nickel	1.0
Selenium	0.16
Silver	0.30
Thallium	0.020
Zinc	70

(2) A one-time notification and certification shall be placed in the facility's files and sent to the Director for K061, K062 or F006 high temperature metals recovery residues that meet the generic exclusion levels for all constituents and do not exhibit any characteristics that are sent to solid waste landfills regulated under Rules R315-301 through R315-320. The notification and certification that is placed in the generators or treaters files shall be updated if the process or operation generating the waste changes and/or if the landfill receiving the waste changes. However, the generator or treater need only notify the Director on an annual basis if such changes occur. Such notification and certification should be sent to the Director by the end of the calendar year, but no later than December 31. The notification shall include the following information: The name and address of the solid waste landfill regulated under Rules R315-301 through R315-320 receiving the waste shipments; the EPA Hazardous Waste Number(s) and treatability group(s) at the initial point of generation; and, the treatment standards applicable to the waste at the initial point of generation. The certification shall be signed by an authorized representative and shall state as follows: "I certify under penalty of law that the generic exclusion levels for all constituents have been met without impermissible dilution and that no characteristic of hazardous waste is exhibited. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

(D) Biological treatment sludge from the treatment of one of the following wastes listed in Section R315-261-32: organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes, EPA Hazardous Waste No. K156, and wastewaters from the production of carbamates and carbamoyl oximes, EPA Hazardous Waste No. K157.

(E) Catalyst inert support media separated from one of the following wastes listed in Section R315-261-32: - Spent hydrotreating catalyst, EPA Hazardous Waste No. K171), and Spent hydrorefining catalyst (EPA Hazardous Waste No. K172.

(d) Any solid waste described in Subsection R315-261-3(c) is not a hazardous waste if it meets the following criteria:

(1) In the case of any solid waste, it does not exhibit any of the characteristics of hazardous waste identified in Sections R315-261-20 through 24. However, wastes that exhibit a characteristic at the point of generation may still be subject to the requirements of Rule R315-268, even if they no longer exhibit a characteristic at the point of land disposal.

(2) In the case of a waste which is a listed waste under Sections R315-261-30 through 35, contains a waste listed under Sections R315-261-30 through 35 or is derived from a waste listed in Sections R315-261-30 through 35, it also has been excluded from Subsection R315-261-3(c) under Sections R315-260-20 and R315-260-22.

(e) (Reserved)

(f) Notwithstanding Subsections R315-261-3(a) through (d) and provided the debris as defined in Rule R315-268 does not exhibit a characteristic identified in Sections R315-261-20 through 24, the following materials are not subject to regulation under Rules R315-260 through 266, R315-268, or R315-270:

(1) Hazardous debris as defined in Rule R315-268 that has been treated using one of the required extraction or destruction technologies specified in Table 1 of Section R315-268-45; persons claiming this exclusion in an enforcement action shall have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements; or

(2) Debris as defined in Rule R315-268 that the Director, considering the extent of contamination, has determined is no longer contaminated with hazardous waste.

(g)(1) A hazardous waste that is listed in Sections R315-261-30 through 35 solely because it exhibits one or more characteristics of ignitability as defined under Section R315-261-21, corrosivity as defined under Section R315-261-22, or reactivity as defined under Section R315-261-23 is not a hazardous waste, if the waste no longer exhibits any characteristic of hazardous waste identified in Sections R315-261-20 through 24.

(2) The exclusion described in Subsection R315-261-3(g)(1) also pertains to:

(i) Any mixture of a solid waste and a hazardous waste listed in Sections R315-261-30 through 35 solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity as regulated under Subsection R315-261-3(a)(2)(iv); and

(ii) Any solid waste generated from treating, storing, or disposing of a hazardous waste listed in Sections R315-261-30 through 35 solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity as regulated under Subsection R315-261-3(c)(2)(i).

(3) Wastes excluded under Subsection R315-261-3(g) are subject to Rule R315-268, as applicable, even if they no longer exhibit a characteristic at the point of land disposal.

(4) Any mixture of a solid waste excluded from regulation under Subsection R315-261-4(b)(7) and a hazardous waste listed in Sections R315-261-30 through 35 solely because it exhibits one or more of the characteristics of ignitability, corrosivity, or reactivity as regulated under Subsection R315-261-3(a)(2)(iv) is not a hazardous waste, if the mixture no longer exhibits any characteristic of hazardous waste identified in Sections R315-261-20 through 24 for which the hazardous waste listed in Sections R315-261-30 through 35 was listed.

(h)(1) Hazardous waste containing radioactive waste is no longer a hazardous waste when it meets the eligibility criteria and conditions of Sections R315-266-210 through 360.

(2) The exemption described in Subsection R315-261-3(h)(1) also pertains to:

(i) Any mixture of a solid waste and an eligible radioactive mixed waste; and

(ii) Any solid waste generated from treating, storing, or

disposing of an eligible radioactive mixed waste.

(3) Waste exempted under Section R315-261-3 shall meet the eligibility criteria and specified conditions in Sections R315-266-225 and R315-266-230, for storage and treatment, and in Sections R315-266-310 and R315-266-315, for transportation and disposal. Waste that fails to satisfy these eligibility criteria and conditions is regulated as hazardous waste.

R315-261-4. Exclusions.

(a) Materials which are not solid wastes. The following materials are not solid wastes for the purpose of Rule R315-261:

(1)(i) Domestic sewage; and

(ii) Any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly-owned treatment works for treatment. "Domestic sewage" means untreated sanitary wastes that pass through a sewer system.

(2) Industrial wastewater discharges that are point source discharges subject to regulation under section 402 of the Clean Water Act, as amended. This exclusion applies only to the actual point source discharge. It does not exclude industrial wastewaters while they are being collected, stored or treated before discharge, nor does it exclude sludges that are generated by industrial wastewater treatment.

(3) Irrigation return flows.

(4) Source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq.

(5) Materials subjected to in-situ mining techniques which are not removed from the ground as part of the extraction process.

(6) Pulping liquors, i.e., black liquor, that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless it is accumulated speculatively as defined in Subsection R315-261-1(c).

(7) Spent sulfuric acid used to produce virgin sulfuric acid, unless it is accumulated speculatively as defined in Subsection R315-261-1(c).

(8) Secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process provided:

(i) Only tank storage is involved, and the entire process through completion of reclamation is closed by being entirely connected with pipes or other comparable enclosed means of conveyance;

(ii) Reclamation does not involve controlled flame combustion, such as occurs in boilers, industrial furnaces, or incinerators;

(iii) The secondary materials are never accumulated in such tanks for over twelve months without being reclaimed; and

(iv) The reclaimed material is not used to produce a fuel, or used to produce products that are used in a manner constituting disposal.

(9)(i) Spent wood preserving solutions that have been reclaimed and are reused for their original intended purpose; and

(ii) Wastewaters from the wood preserving process that have been reclaimed and are reused to treat wood.

(iii) Prior to reuse, the wood preserving wastewaters and spent wood preserving solutions described in Subsections R315-261-4(a)(9)(i) and (ii), so long as they meet all of the following conditions:

(A) The wood preserving wastewaters and spent wood preserving solutions are reused on-site at water borne plants in the production process for their original intended purpose;

(B) Prior to reuse, the wastewaters and spent wood preserving solutions are managed to prevent release to either land or groundwater or both;

(C) Any unit used to manage wastewaters and/or spent wood preserving solutions prior to reuse can be visually or

otherwise determined to prevent such releases;

(D) Any drip pad used to manage the wastewaters and/or spent wood preserving solutions prior to reuse complies with the standards in 40 CFR 265.440 through R315-265-445, which are adopted and incorporated by reference, regardless of whether the plant generates a total of less than 100 kg/month of hazardous waste; and

(E) Prior to operating pursuant to this exclusion, the plant owner or operator prepares a one-time notification stating that the plant intends to claim the exclusion, giving the date on which the plant intends to begin operating under the exclusion, and containing the following language: "I have read the applicable regulation establishing an exclusion for wood preserving wastewaters and spent wood preserving solutions and understand it requires me to comply at all times with the conditions set out in the regulation." The plant shall maintain a copy of that document in its on-site records until closure of the facility. The exclusion applies so long as the plant meets all of the conditions. If the plant goes out of compliance with any condition, it may apply to the Director for reinstatement. The Director may reinstate the exclusion upon finding that the plant has returned to compliance with all conditions and that the violations are not likely to recur.

(10) EPA Hazardous Waste Nos. K060, K087, K141, K142, K143, K144, K145, K147, and K148, and any wastes from the coke by-products processes that are hazardous only because they exhibit the Toxicity Characteristic specified in Section R315-261-24, subsequent to generation, these materials are recycled to coke ovens, to the tar recovery process as a feedstock to produce coal tar, or mixed with coal tar prior to the tar's sale or refining. This exclusion is conditioned on there being no land disposal of the wastes from the point they are generated to the point they are recycled to coke ovens or tar recovery or refining processes, or mixed with coal tar.

(11) Nonwastewater splash condenser dross residue from the treatment of K061 in high temperature metals recovery units, provided it is shipped in drums, if shipped and not land disposed before recovery.

(12)(i) Oil-bearing hazardous secondary materials, i.e., sludges, byproducts, or spent materials, that are generated at a petroleum refinery, SIC code 2911, and are inserted into the petroleum refining process, SIC code 2911-including, but not limited to, distillation, catalytic cracking, fractionation, or thermal cracking units, i.e., cokers, unless the material is placed on the land, or speculatively accumulated before being so recycled. Materials inserted into thermal cracking units are excluded under Subsection R315-261-4(12)(i), provided that the coke product also does not exhibit a characteristic of hazardous waste. Oil-bearing hazardous secondary materials may be inserted into the same petroleum refinery where they are generated, or sent directly to another petroleum refinery and still be excluded under this provision. Except as provided in Subsection R315-261-4(a)(12)(ii), oil-bearing hazardous secondary materials generated elsewhere in the petroleum industry, i.e., from sources other than petroleum refineries, are not excluded under Section R315-261-4. Residuals generated from processing or recycling materials excluded under Subsection R315-261-4(a)(12)(i), where such materials as generated would have otherwise met a listing under Sections R315-261-30 through R315-261-35, are designated as F037 listed wastes when disposed of or intended for disposal.

(ii) Recovered oil that is recycled in the same manner and with the same conditions as described in Subsection R315-261-4(a)(12)(i). Recovered oil is oil that has been reclaimed from secondary materials, including wastewater, generated from normal petroleum industry practices, including refining, exploration and production, bulk storage, and transportation incident thereto, SIC codes 1311, 1321, 1381, 1382, 1389, 2911, 4612, 4613, 4922, 4923, 4789, 5171, and 5172.

Recovered oil does not include oil-bearing hazardous wastes listed in Sections R315-261-30 through 35; however, oil recovered from such wastes may be considered recovered oil. Recovered oil does not include used oil as defined in Subsection 19-6-703(19).

(13) Excluded scrap metal (processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal) being recycled.

(14) Shredded circuit boards being recycled provided that they are:

(i) Stored in containers sufficient to prevent a release to the environment prior to recovery; and

(ii) Free of mercury switches, mercury relays and nickel-cadmium batteries and lithium batteries.

(15) Condensates derived from the overhead gases from kraft mill steam strippers that are used to comply with 40 CFR 63.446(e). The exemption applies only to combustion at the mill generating the condensates.

(16) Reserved.

(17) Spent materials, as defined in Section R315-261-1, other than hazardous wastes listed in Sections R315-261-30 through 35, generated within the primary mineral processing industry from which minerals, acids, cyanide, water, or other values are recovered by mineral processing or by beneficiation, provided that:

(i) The spent material is legitimately recycled to recover minerals, acids, cyanide, water or other values;

(ii) The spent material is not accumulated speculatively;

(iii) Except as provided in Subsection R315-261-4(a)(17)(iv), the spent material is stored in tanks, containers, or buildings meeting the following minimum integrity standards: a building shall be an engineered structure with a floor, walls, and a roof all of which are made of non-earthen materials providing structural support, except smelter buildings may have partially earthen floors provided the secondary material is stored on the non-earthen portion, and have a roof suitable for diverting rainwater away from the foundation; a tank shall be free standing, not be a surface impoundment, as defined in Section R315-260-10, and be manufactured of a material suitable for containment of its contents; a container shall be free standing and be manufactured of a material suitable for containment of its contents. If tanks or containers contain any particulate which may be subject to wind dispersal, the owner/operator shall operate these units in a manner which controls fugitive dust. Tanks, containers, and buildings shall be designed, constructed and operated to prevent significant releases to the environment of these materials.

(iv) The Director may make a site-specific determination, after public review and comment, that only solid mineral processing spent material may be placed on pads rather than tanks containers, or buildings. Solid mineral processing spent materials do not contain any free liquid. The Director shall affirm that pads are designed, constructed and operated to prevent significant releases of the secondary material into the environment. Pads shall provide the same degree of containment afforded by the non-RCRA tanks, containers and buildings eligible for exclusion.

(A) The Director shall also consider if storage on pads poses the potential for significant releases via groundwater, surface water, and air exposure pathways. Factors to be considered for assessing the groundwater, surface water, air exposure pathways are: The volume and physical and chemical properties of the secondary material, including its potential for migration off the pad; the potential for human or environmental exposure to hazardous constituents migrating from the pad via each exposure pathway, and the possibility and extent of harm to human and environmental receptors via each exposure pathway.

(B) Pads shall meet the following minimum standards: Be

designed of non-earthen material that is compatible with the chemical nature of the mineral processing spent material, capable of withstanding physical stresses associated with placement and removal, have run on/runoff controls, be operated in a manner which controls fugitive dust, and have integrity assurance through inspections and maintenance programs.

(C) Before making a determination under Subsection R315-261-4(a)(17)(iv), the Director shall provide notice and the opportunity for comment to all persons potentially interested in the determination. This can be accomplished by placing notice of this action in major local newspapers, or broadcasting notice over local radio stations.

(v) The owner or operator provides notice to the Director providing the following information: The types of materials to be recycled; the type and location of the storage units and recycling processes; and the annual quantities expected to be placed in land-based units. This notification shall be updated when there is a change in the type of materials recycled or the location of the recycling process.

(vi) For purposes of Subsection R315-261-4(b)(7), mineral processing spent materials shall be the result of mineral processing and may not include any listed hazardous wastes. Listed hazardous wastes and characteristic hazardous wastes generated by non-mineral processing industries are not eligible for the conditional exclusion from the definition of solid waste.

(18) Petrochemical recovered oil from an associated organic chemical manufacturing facility, where the oil is to be inserted into the petroleum refining process, SIC code 2911, along with normal petroleum refinery process streams, provided:

(i) The oil is hazardous only because it exhibits the characteristic of ignitability, as defined in Section R315-261-21, and/or toxicity for benzene, Section R315-261-24, waste code D018; and

(ii) The oil generated by the organic chemical manufacturing facility is not placed on the land, or speculatively accumulated before being recycled into the petroleum refining process. An "associated organic chemical manufacturing facility" is a facility where the primary SIC code is 2869, but where operations may also include SIC codes 2821, 2822, and 2865; and is physically co-located with a petroleum refinery; and where the petroleum refinery to which the oil being recycled is returned also provides hydrocarbon feedstocks to the organic chemical manufacturing facility. "Petrochemical recovered oil" is oil that has been reclaimed from secondary materials, i.e., sludges, byproducts, or spent materials, including wastewater, from normal organic chemical manufacturing operations, as well as oil recovered from organic chemical manufacturing processes.

(19) Spent caustic solutions from petroleum refining liquid treating processes used as a feedstock to produce cresylic or naphthenic acid unless the material is placed on the land, or accumulated speculatively as defined in Subsection R315-261-1(c).

(20) Hazardous secondary materials used to make zinc fertilizers, provided that the following conditions specified are satisfied:

(i) Hazardous secondary materials used to make zinc micronutrient fertilizers shall not be accumulated speculatively, as defined in Subsection R315-261-1(c)(8).

(ii) Generators and intermediate handlers of zinc-bearing hazardous secondary materials that are to be incorporated into zinc fertilizers shall:

(A) Submit a one-time notice to the Director, which contains the name, address and EPA ID number of the generator or intermediate handler facility, provides a brief description of the secondary material that will be subject to the exclusion, and identifies when the manufacturer intends to begin managing excluded, zinc-bearing hazardous secondary materials under the conditions specified in Subsection R315-261-4(a)(20).

(B) Store the excluded secondary material in tanks,

containers, or buildings that are constructed and maintained in a way that prevents releases of the secondary materials into the environment. At a minimum, any building used for this purpose shall be an engineered structure made of non-earthen materials that provide structural support, and shall have a floor, walls and a roof that prevent wind dispersal and contact with rainwater. Tanks used for this purpose shall be structurally sound and, if outdoors, shall have roofs or covers that prevent contact with wind and rain. Containers used for this purpose shall be kept closed except when it is necessary to add or remove material, and shall be in sound condition. Containers that are stored outdoors shall be managed within storage areas that:

(I) Have containment structures or systems sufficiently impervious to contain leaks, spills and accumulated precipitation; and

(II) Provide for effective drainage and removal of leaks, spills and accumulated precipitation; and

(III) Prevent run-on into the containment system.

(C) With each off-site shipment of excluded hazardous secondary materials, provide written notice to the receiving facility that the material is subject to the conditions of Subsection R315-261-4(a)(20).

(D) Maintain at the generator's or intermediate handlers' facility for no less than three years records of all shipments of excluded hazardous secondary materials. For each shipment these records shall at a minimum contain the following information:

(I) Name of the transporter and date of the shipment;

(II) Name and address of the facility that received the excluded material, and documentation confirming receipt of the shipment; and

(III) Type and quantity of excluded secondary material in each shipment.

(iii) Manufacturers of zinc fertilizers or zinc fertilizer ingredients made from excluded hazardous secondary materials shall:

(A) Store excluded hazardous secondary materials in accordance with the storage requirements for generators and intermediate handlers, as specified in Subsection R315-261-4(a)(20)(ii)(B).

(B) Submit a one-time notification to the Director that, at a minimum, specifies the name, address and EPA ID number of the manufacturing facility, and identifies when the manufacturer intends to begin managing excluded, zinc-bearing hazardous secondary materials under the conditions specified in Subsection R315-261-4(a)(20).

(C) Maintain for a minimum of three years records of all shipments of excluded hazardous secondary materials received by the manufacturer, which shall at a minimum identify for each shipment the name and address of the generating facility, name of transporter and date the materials were received, the quantity received, and a brief description of the industrial process that generated the material.

(D) Submit to the Director an annual report that identifies the total quantities of all excluded hazardous secondary materials that were used to manufacture zinc fertilizers or zinc fertilizer ingredients in the previous year, the name and address of each generating facility, and the industrial process(s) from which they were generated.

(iv) Nothing in Section R315-261-4 preempts, overrides or otherwise negates the provision in Section R315-262-11, which requires any person who generates a solid waste to determine if that waste is a hazardous waste.

(v) Interim status and permitted storage units that have been used to store only zinc-bearing hazardous wastes prior to the submission of the one-time notice described in Subsection R315-261-4(a)(20)(ii)(A), and that afterward will be used only to store hazardous secondary materials excluded under Subsection R315-261-4(a)(20), are not subject to the closure

requirements of Rules R315-264 and R315-265.

(21) Zinc fertilizers made from hazardous wastes, or hazardous secondary materials that are excluded under Subsection R315-261-4(a)(20), provided that:

- (i) The fertilizers meet the following contaminant limits:
 - (A) For metal contaminants:

TABLE

Constituent	Maximum Allowable Total Concentration in Fertilizer, per Unit (1%) of Zinc ppm)
Arsenic	0.3
Cadmium	1.4
Chromium	0.6
Lead	2.8
Mercury	0.3

(B) For dioxin contaminants the fertilizer shall contain no more than eight (8) parts per trillion of dioxin, measured as toxic equivalent.

(ii) The manufacturer performs sampling and analysis of the fertilizer product to determine compliance with the contaminant limits for metals no less than every six months, and for dioxins no less than every twelve months. Testing shall also be performed whenever changes occur to manufacturing processes or ingredients that could significantly affect the amounts of contaminants in the fertilizer product. The manufacturer may use any reliable analytical method to demonstrate that no constituent of concern is present in the product at concentrations above the applicable limits. It is the responsibility of the manufacturer to ensure that the sampling and analysis are unbiased, precise, and representative of the product(s) introduced into commerce.

(iii) The manufacturer maintains for no less than three years records of all sampling and analyses performed for purposes of determining compliance with the requirements of Subsection R315-261-4(a)(21)(ii). Such records shall at a minimum include:

- (A) The dates and times product samples were taken, and the dates the samples were analyzed;
- (B) The names and qualifications of the person(s) taking the samples;
- (C) A description of the methods and equipment used to take the samples;
- (D) The name and address of the laboratory facility at which analyses of the samples were performed;
- (E) A description of the analytical methods used, including any cleanup and sample preparation methods; and
- (F) All laboratory analytical results used to determine compliance with the contaminant limits specified in this Subsection R315-261-4(a)(21).

(22) Used cathode ray tubes (CRTs)

(i) Used, intact CRTs as defined in Section R315-260-10 are not solid wastes within the United States unless they are disposed, or unless they are speculatively accumulated as defined in Subsection R315-261-1(c)(8) by CRT collectors or glass processors.

(ii) Used, intact CRTs as defined in Section R315-260-10 are not solid wastes when exported for recycling provided that they meet the requirements of Section R315-261-40.

(iii) Used, broken CRTs as defined in Section R315-260-10 are not solid wastes provided that they meet the requirements of Section R315-261-39.

(iv) Glass removed from CRTs is not a solid waste provided that it meets the requirements of Section R315-261-39(c).

(23) Hazardous secondary material generated and legitimately reclaimed within the United States or its territories and under the control of the generator, provided that the material complies with Subsections R315-261-4(a)(23)(i) and (ii):

- (i)(A) The hazardous secondary material is generated and

reclaimed at the generating facility, for purposes of this definition, generating facility means all contiguous property owned, leased, or otherwise controlled by the hazardous secondary material generator; or

(B) The hazardous secondary material is generated and reclaimed at different facilities, if the reclaiming facility is controlled by the generator or if both the generating facility and the reclaiming facility are controlled by a person as defined in Section R315-260-10, and if the generator provides one of the following certifications: "on behalf of (insert generator facility name), I certify that this facility will send the indicated hazardous secondary material to (insert reclaimer facility name), which is controlled by (insert generator facility name) and that (insert name of either facility) has acknowledged full responsibility for the safe management of the hazardous secondary material," or "on behalf of (insert generator facility name), I certify that this facility will send the indicated hazardous secondary material to (insert reclaimer facility name), that both facilities are under common control, and that (insert name of either facility) has acknowledged full responsibility for the safe management of the hazardous secondary material." For purposes of this paragraph, "control" means the power to direct the policies of the facility, whether by the ownership of stock, voting rights, or otherwise, except that contractors who operate facilities on behalf of a different person as defined in Section R315-260-10 shall not be deemed to "control" such facilities. The generating and receiving facilities shall both maintain at their facilities for no less than three years records of hazardous secondary materials sent or received under this exclusion. In both cases, the records shall contain the name of the transporter, the date of the shipment, and the type and quantity of the hazardous secondary material shipped or received under the exclusion. These requirements may be satisfied by routine business records, e.g., financial records, bills of lading, copies of DOT shipping papers, or electronic confirmations; or

(C) The hazardous secondary material is generated pursuant to a written contract between a tolling contractor and a toll manufacturer and is reclaimed by the tolling contractor, if the tolling contractor certifies the following: "On behalf of (insert tolling contractor name), I certify that (insert tolling contractor name) has a written contract with (insert toll manufacturer name) to manufacture (insert name of product or intermediate) which is made from specified unused materials, and that (insert tolling contractor name) will reclaim the hazardous secondary materials generated during this manufacture. On behalf of (insert tolling contractor name), I also certify that (insert tolling contractor name) retains ownership of, and responsibility for, the hazardous secondary materials that are generated during the course of the manufacture, including any releases of hazardous secondary materials that occur during the manufacturing process". The tolling contractor shall maintain at its facility for no less than three years records of hazardous secondary materials received pursuant to its written contract with the tolling manufacturer, and the tolling manufacturer shall maintain at its facility for no less than three years records of hazardous secondary materials shipped pursuant to its written contract with the tolling contractor. In both cases, the records shall contain the name of the transporter, the date of the shipment, and the type and quantity of the hazardous secondary material shipped or received pursuant to the written contract. These requirements may be satisfied by routine business records, e.g., financial records, bills of lading, copies of DOT shipping papers, or electronic confirmations. For purposes of Subsection R315-261-4(a)(23)(i)(C), tolling contractor means a person who arranges for the production of a product or intermediate made from specified unused materials through a written contract with a toll manufacturer. Toll manufacturer means a person who produces a product or intermediate made from specified unused materials

pursuant to a written contract with a tolling contractor.

(ii)(A) The hazardous secondary material is contained as defined in Section R315-260-10. A hazardous secondary material released to the environment is discarded and a solid waste unless it is immediately recovered for the purpose of reclamation. Hazardous secondary material managed in a unit with leaks or other continuing or intermittent unpermitted releases is discarded and a solid waste.

(B) The hazardous secondary material is not speculatively accumulated, as defined in Subsection R315-261-1(c)(8).

(C) Notice is provided as required by Section R315-260-42.

(D) The material is not otherwise subject to material-specific management conditions under Subsection R315-261-4(a) when reclaimed, and it is not a spent lead-acid battery, see Sections R315-266-80 and R315-273-2.

(E) Persons performing the recycling of hazardous secondary materials under this exclusion shall maintain documentation of their legitimacy determination on-site. Documentation shall be a written description of how the recycling meets all four factors in Subsection R315-260-43(a). Documentation shall be maintained for three years after the recycling operation has ceased.

(F) The emergency preparedness and response requirements found in Sections R315-261-400, 410, 411 and 420 are met.

(24) Hazardous secondary material that is generated and then transferred to a verified reclamation facility for the purpose of reclamation is not a solid waste, provided that:

(i) The material is not speculatively accumulated, as defined in Subsection R315-261-1(c)(8);

(ii) The material is not handled by any person or facility other than the hazardous secondary material generator, the transporter, an intermediate facility or a reclaimer, and, while in transport, is not stored for more than 10 days at a transfer facility, as defined in Section R315-260-10, and is packaged according to applicable Department of Transportation regulations at 49 CFR parts 173, 178, and 179 while in transport;

(iii) The material is not otherwise subject to material-specific management conditions under Subsection R315-261-4(a) when reclaimed, and it is not a spent lead-acid battery, see Sections R315-266-80 and R315-273-2;

(iv) The reclamation of the material is legitimate, as specified under Section R315-260-43;

(v) The hazardous secondary material generator satisfies all of the following conditions:

(A) The material shall be contained as defined in Section R315-260-10. A hazardous secondary material released to the environment is discarded and a solid waste unless it is immediately recovered for the purpose of recycling. Hazardous secondary material managed in a unit with leaks or other continuing releases is discarded and a solid waste.

(B) The hazardous secondary material generator shall arrange for transport of hazardous secondary materials to a verified reclamation facility, or facilities, in the United States. A verified reclamation facility is a facility that has been granted a variance under Subsection R315-260-31(d), or a reclamation facility where the management of the hazardous secondary materials is addressed under a hazardous waste Part B permit or interim status standards. If the hazardous secondary material will be passing through an intermediate facility, the intermediate facility shall have been granted a variance under Subsection R315-260-31(d) or the management of the hazardous secondary materials at that facility shall be addressed under a hazardous waste Part B permit or interim status standards, and the hazardous secondary material generator shall make contractual arrangements with the intermediate facility to ensure that the hazardous secondary material is sent to the reclamation facility

identified by the hazardous secondary material generator.

(C) The hazardous secondary material generator shall maintain at the generating facility for no less than three years records of all off-site shipments of hazardous secondary materials. For each shipment, these records shall, at a minimum, contain the following information:

(I) Name of the transporter and date of the shipment;

(II) Name and address of each reclaimer and, if applicable, the name and address of each intermediate facility to which the hazardous secondary material was sent;

(III) The type and quantity of hazardous secondary material in the shipment.

(D) The hazardous secondary material generator shall maintain at the generating facility for no less than three years confirmations of receipt from each reclaimer and, if applicable, each intermediate facility for all off-site shipments of hazardous secondary materials. Confirmations of receipt shall include the name and address of the reclaimer, or intermediate facility, the type and quantity of the hazardous secondary materials received and the date which the hazardous secondary materials were received. This requirement may be satisfied by routine business records, e.g., financial records, bills of lading, copies of DOT shipping papers, or electronic confirmations of receipt;

(E) The hazardous secondary material generator shall comply with the emergency preparedness and response conditions in Sections R315-261-400, 410, 411, and 420.

(vi) Reclaimers of hazardous secondary material excluded from regulation under this exclusion and intermediate facilities as defined in Section R315-260-10 satisfy all of the following conditions:

(A) The reclaimer and intermediate facility shall maintain at its facility for no less than three years records of all shipments of hazardous secondary material that were received at the facility and, if applicable, for all shipments of hazardous secondary materials that were received and subsequently sent off-site from the facility for further reclamation. For each shipment, these records shall at a minimum contain the following information:

(I) Name of the transporter and date of the shipment;

(II) Name and address of the hazardous secondary material generator and, if applicable, the name and address of the reclaimer or intermediate facility which the hazardous secondary materials were received from;

(III) The type and quantity of hazardous secondary material in the shipment; and

(IV) For hazardous secondary materials that, after being received by the reclaimer or intermediate facility, were subsequently transferred off-site for further reclamation, the name and address of the, subsequent, reclaimer and, if applicable, the name and address of each intermediate facility to which the hazardous secondary material was sent.

(B) The intermediate facility shall send the hazardous secondary material to the reclaimer(s) designated by the hazardous secondary materials generator.

(C) The reclaimer and intermediate facility shall send to the hazardous secondary material generator confirmations of receipt for all off-site shipments of hazardous secondary materials. Confirmations of receipt shall include the name and address of the reclaimer, or intermediate facility, the type and quantity of the hazardous secondary materials received and the date which the hazardous secondary materials were received. This requirement may be satisfied by routine business records, e.g., financial records, bills of lading, copies of DOT shipping papers, or electronic confirmations of receipt.

(D) The reclaimer and intermediate facility shall manage the hazardous secondary material in a manner that is at least as protective as that employed for analogous raw material and shall be contained. An "analogous raw material" is a raw material for which a hazardous secondary material is a substitute and serves

the same function and has similar physical and chemical properties as the hazardous secondary material.

(E) Any residuals that are generated from reclamation processes shall be managed in a manner that is protective of human health and the environment. If any residuals exhibit a hazardous characteristic according to Sections R315-261-20 through 24, or if they themselves are specifically listed in Sections R315-261-30 through 35, such residuals are hazardous wastes and shall be managed in accordance with the applicable requirements of Rules R315-260 through 266, 268, and 270.

(F) The reclaimer and intermediate facility have financial assurance as required under Sections R315-261-140 through 151.

(G) The reclaimer and intermediate facility have been granted a variance under Subsection R315-260-31(d) or have a hazardous waste Part B permit or interim status standards that address the management of the hazardous secondary materials; and

(vii) All persons claiming the exclusion under Subsection R315-261-4(a)(24) provide notification as required under Section R315-260-42.

(25) Reserved

(26) Solvent-contaminated wipes that are sent for cleaning and reuse are not solid wastes from the point of generation, provided that

(i) The solvent-contaminated wipes, when accumulated, stored, and transported, are contained in non-leaking, closed containers that are labeled "Excluded Solvent-Contaminated Wipes." The containers shall be able to contain free liquids, should free liquids occur. During accumulation, a container is considered closed when there is complete contact between the fitted lid and the rim, except when it is necessary to add or remove solvent-contaminated wipes. When the container is full, or when the solvent-contaminated wipes are no longer being accumulated, or when the container is being transported, the container shall be sealed with all lids properly and securely affixed to the container and all openings tightly bound or closed sufficiently to prevent leaks and emissions;

(ii) The solvent-contaminated wipes may be accumulated by the generator for up to 180 days from the start date of accumulation for each container prior to being sent for cleaning;

(iii) At the point of being sent for cleaning on-site or at the point of being transported off-site for cleaning, the solvent-contaminated wipes shall contain no free liquids as defined in Section R315-260-10.

(iv) Free liquids removed from the solvent-contaminated wipes or from the container holding the wipes shall be managed according to the applicable regulations found in Rules R315-260 through 266, 268, 270 and 273;

(v) Generators shall maintain at their site the following documentation:

(A) Name and address of the laundry or dry cleaner that is receiving the solvent-contaminated wipes;

(B) Documentation that the 180-day accumulation time limit in Subsection R315-261-4(a)(26)(ii) is being met;

(C) Description of the process the generator is using to ensure the solvent-contaminated wipes contain no free liquids at the point of being laundered or dry cleaned on-site or at the point of being transported off-site for laundering or dry cleaning;

(vi) The solvent-contaminated wipes are sent to a laundry or dry cleaner whose discharge, if any, is regulated under sections 301 and 402 or section 307 of the Clean Water Act.

(27) Hazardous secondary material that is generated and then transferred to another person for the purpose of remanufacturing is not a solid waste, provided that:

(i) The hazardous secondary material consists of one or more of the following spent solvents: Toluene, xylenes, ethylbenzene, 1,2,4-trimethylbenzene, chlorobenzene, n-hexane,

cyclohexane, methyl tert-butyl ether, acetonitrile, chloroform, chloromethane, dichloromethane, methyl isobutyl ketone, NN-dimethylformamide, tetrahydrofuran, n-butyl alcohol, ethanol, and/or methanol;

(ii) The hazardous secondary material originated from using one or more of the solvents listed in Subsection R315-261-4(a)(27)(i) in a commercial grade for reacting, extracting, purifying, or blending chemicals, or for rinsing out the process lines associated with these functions; in the pharmaceutical manufacturing, NAICS 325412; basic organic chemical manufacturing, NAICS 325199; plastics and resins manufacturing, NAICS 325211; and/or the paints and coatings manufacturing sectors, NAICS 325510.

(iii) The hazardous secondary material generator sends the hazardous secondary material spent solvents listed in Subsection R315-261-4(a)(27)(i) to a remanufacturer in the pharmaceutical manufacturing, NAICS 325412; basic organic chemical manufacturing, NAICS 325199; plastics and resins manufacturing, NAICS 325211; and/or the paints and coatings manufacturing sectors, NAICS 325510.

(iv) After remanufacturing one or more of the solvents listed in Subsection R315-261-4(a)(27)(i), the use of the remanufactured solvent shall be limited to reacting, extracting, purifying, or blending chemicals, or for rinsing out the process lines associated with these functions, in the pharmaceutical manufacturing, NAICS 325412; basic organic chemical manufacturing, NAICS 325199; plastics and resins manufacturing, NAICS 325211; and the paints and coatings manufacturing sectors, NAICS 325510; or to using them as ingredients in a product. These allowed uses correspond to chemical functional uses enumerated under the Chemical Data Reporting Rule of the Toxic Substances Control Act, 40 CFR parts 704, 710-711, including Industrial Function Codes U015, solvents consumed in a reaction to produce other chemicals, and U030, solvents become part of the mixture;

(v) After remanufacturing one or more of the solvents listed in Subsection R315-261-4(a)(27)(i), the use of the remanufactured solvent does not involve cleaning or degreasing oil, grease, or similar material from textiles, glassware, metal surfaces, or other articles. (These disallowed continuing uses correspond to chemical functional uses in Industrial Function Code U029 under the Chemical Data Reporting Rule of the Toxic Substances Control Act.); and

(vi) Both the hazardous secondary material generator and the remanufacturer shall:

(A) Notify the Director and update the notification every two years per Section R315-260-42;

(B) Develop and maintain an up-to-date remanufacturing plan which identifies:

(I) The name, address and EPA ID number of the generator(s) and the remanufacturer(s),

(II) The types and estimated annual volumes of spent solvents to be remanufactured,

(III) The processes and industry sectors that generate the spent solvents,

(IV) The specific uses and industry sectors for the remanufactured solvents, and

(V) A certification from the remanufacturer stating "on behalf of (insert remanufacturer facility name), I certify that this facility is a remanufacturer under pharmaceutical manufacturing, NAICS 325412; basic organic chemical manufacturing, NAICS 325199; plastics and resins manufacturing, NAICS 325211; and/or the paints and coatings manufacturing sectors, NAICS 325510; and will accept the spent solvent(s) for the sole purpose of remanufacturing into commercial-grade solvent(s) that will be used for reacting, extracting, purifying, or blending chemicals, or for rinsing out the process lines associated with these functions, or for use as product ingredient(s). I also certify that the remanufacturing

equipment, vents, and tanks are equipped with and are operating air emission controls in compliance with the appropriate Clean Air Act regulations under 40 CFR part 60, part 61 or part 63, or, absent such Clean Air Act standards for the particular operation or piece of equipment covered by the remanufacturing exclusion, are in compliance with the appropriate standards in Sections R315-261-1030 through 1035, 1050 through 1064 and 1080 through 1089";

(C) Maintain records of shipments and confirmations of receipts for a period of three years from the dates of the shipments;

(D) Prior to remanufacturing, store the hazardous spent solvents in tanks or containers that meet technical standards found in Sections R315-261-17- through 179 and 190 through 200, with the tanks and containers being labeled or otherwise having an immediately available record of the material being stored;

(E) During remanufacturing, and during storage of the hazardous secondary materials prior to remanufacturing, the remanufacturer certifies that the remanufacturing equipment, vents, and tanks are equipped with and are operating air emission controls in compliance with the appropriate Clean Air Act regulations under 40 CFR part 60, part 61 or part 63; or, absent such Clean Air Act standards for the particular operation or piece of equipment covered by the remanufacturing exclusion, are in compliance with the appropriate standards in Sections R315-261-1030 through 1035, 1050 through 1064 and 1080 through 1089; and

(F) Meet the requirements prohibiting speculative accumulation per Subsection R315-261-1(c)(8).

(b) Solid wastes which are not hazardous wastes. The following solid wastes are not hazardous wastes:

(1) Household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered, e.g., refuse-derived fuel, or reused. "Household waste" means any material, including garbage, trash and sanitary wastes in septic tanks, derived from households, including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds and day-use recreation areas. A resource recovery facility managing municipal solid waste shall not be deemed to be treating, storing, disposing of, or otherwise managing hazardous wastes for the purposes of regulation under this subtitle, if such facility:

(i) Receives and burns only

(A) Household waste, from single and multiple dwellings, hotels, motels, and other residential sources, and

(B) Solid waste from commercial or industrial sources that does not contain hazardous waste; and

(ii) Such facility does not accept hazardous wastes and the owner or operator of such facility has established contractual requirements or other appropriate notification or inspection procedures to assure that hazardous wastes are not received at or burned in such facility.

(2) Solid wastes generated by any of the following and which are returned to the soils as fertilizers:

(i) The growing and harvesting of agricultural crops.

(ii) The raising of animals, including animal manures.

(3) Mining overburden returned to the mine site.

(4)(i) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels, except as provided by Section R315-266-112 for facilities that burn or process hazardous waste.

(ii) The following wastes generated primarily from processes that support the combustion of coal or other fossil fuels that are co-disposed with the wastes in Subsection R315-261-4(b)(4)(i), except as provided by Section R315-266-112 for facilities that burn or process hazardous waste:

(A) Coal pile run-off. For purposes of Subsection R315-

261-4(b)(4), coal pile run-off means any precipitation that drains off coal piles.

(B) Boiler cleaning solutions. For purposes of Subsection R315-261-4(b)(4), boiler cleaning solutions means water solutions and chemical solutions used to clean the fire-side and water-side of the boiler.

(C) Boiler blowdown. For purposes of Subsection R315-261-4(b)(4), boiler blowdown means water purged from boilers used to generate steam.

(D) Process water treatment and demineralizer regeneration wastes. For purposes of Subsection R315-261-4(b)(4), process water treatment and demineralizer regeneration wastes means sludges, rinses, and spent resins generated from processes to remove dissolved gases, suspended solids, and dissolved chemical salts from combustion system process water.

(E) Cooling tower blowdown. For purposes of Subsection R315-261-4(b)(4), cooling tower blowdown means water purged from a closed cycle cooling system. Closed cycle cooling systems include cooling towers, cooling ponds, or spray canals.

(F) Air heater and precipitator washes. For purposes of Subsection R315-261-4(b)(4), air heater and precipitator washes means wastes from cleaning air preheaters and electrostatic precipitators.

(G) Effluents from floor and yard drains and sumps. For purposes of Subsection R315-261-4(b)(4), effluents from floor and yard drains and sumps means wastewaters, such as wash water, collected by or from floor drains, equipment drains, and sumps located inside the power plant building; and wastewaters, such as rain runoff, collected by yard drains and sumps located outside the power plant building.

(H) Wastewater treatment sludges. For purposes of Subsection R315-261-4(b)(4), wastewater treatment sludges refers to sludges generated from the treatment of wastewaters specified in Subsections R315-261-4(b)(4)(ii)(A) through (F).

(5) Drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy.

(6)(i) Wastes which fail the test for the Toxicity Characteristic because chromium is present or are listed in Sections R315-261-30 through R316-261-35 due to the presence of chromium, which do not fail the test for the Toxicity Characteristic for any other constituent or are not listed due to the presence of any other constituent, and which do not fail the test for any other characteristic, if it is shown by a waste generator or by waste generators that:

(A) The chromium in the waste is exclusively, or nearly exclusively, trivalent chromium; and

(B) The waste is generated from an industrial process which uses trivalent chromium exclusively (or nearly exclusively) and the process does not generate hexavalent chromium; and

(C) The waste is typically and frequently managed in non-oxidizing environments.

(ii) Specific wastes which meet the standard in Subsections R315-261-4(b)(6)(i)(A), (B), and (C), so long as they do not fail the test for the toxicity characteristic for any other constituent, and do not exhibit any other characteristic, are:

(A) Chrome (blue) trimmings generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearing.

(B) Chrome (blue) shavings generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearing.

(C) Buffing dust generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue.

(D) Sewer screenings generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearing.

(E) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearing.

(F) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; and through-the-blue.

(G) Waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other leather product manufacturing industries.

(H) Wastewater treatment sludges from the production of TiO₂ pigment using chromium-bearing ores by the chloride process.

(7) Solid waste from the extraction, beneficiation, and processing of ores and minerals, including coal, phosphate rock, and overburden from the mining of uranium ore, except as provided by Section R315-266-112 for facilities that burn or process hazardous waste.

(i) For purposes of Subsection R315-261-4(b)(7) beneficiation of ores and minerals is restricted to the following activities; crushing; grinding; washing; dissolution; crystallization; filtration; sorting; sizing; drying; sintering; pelletizing; briquetting; calcining to remove water and/or carbon dioxide; roasting, autoclaving, and/or chlorination in preparation for leaching (except where the roasting (and/or autoclaving and/or chlorination)/leaching sequence produces a final or intermediate product that does not undergo further beneficiation or processing); gravity concentration; magnetic separation; electrostatic separation; flotation; ion exchange; solvent extraction; electrowinning; precipitation; amalgamation; and heap, dump, vat, tank, and in situ leaching.

(ii) For the purposes of Subsection R315-261-4(b)(7), solid waste from the processing of ores and minerals includes only the following wastes as generated:

- (A) Slag from primary copper processing;
- (B) Slag from primary lead processing;
- (C) Red and brown muds from bauxite refining;
- (D) Phosphogypsum from phosphoric acid production;
- (E) Slag from elemental phosphorus production;
- (F) Gasifier ash from coal gasification;
- (G) Process wastewater from coal gasification;
- (H) Calcium sulfate wastewater treatment plant sludge from primary copper processing;
- (I) Slag tailings from primary copper processing;
- (J) Fluorogypsum from hydrofluoric acid production;
- (K) Process wastewater from hydrofluoric acid production;
- (L) Air pollution control dust/sludge from iron blast furnaces;
- (M) Iron blast furnace slag;
- (N) Treated residue from roasting/leaching of chrome ore;
- (O) Process wastewater from primary magnesium processing by the anhydrous process;
- (P) Process wastewater from phosphoric acid production;
- (Q) Basic oxygen furnace and open hearth furnace air pollution control dust/sludge from carbon steel production;
- (R) Basic oxygen furnace and open hearth furnace slag from carbon steel production;
- (S) Chloride process waste solids from titanium

tetrachloride production;

(T) Slag from primary zinc processing.

(iii) A residue derived from co-processing mineral processing secondary materials with normal beneficiation raw materials or with normal mineral processing raw materials remains excluded under Subsection R315-261-4(b) if the owner or operator:

(A) Processes at least 50 percent by weight normal beneficiation raw materials or normal mineral processing raw materials; and,

(B) Legitimately reclaims the secondary mineral processing materials.

(8) Cement kiln dust waste, except as provided by Section R315-266-112 for facilities that burn or process hazardous waste.

(9) Solid waste which consists of discarded arsenical-treated wood or wood products which fails the test for the Toxicity Characteristic for Hazardous Waste Codes D004 through D017 and which is not a hazardous waste for any other reason if the waste is generated by persons who utilize the arsenical-treated wood and wood products for these materials' intended end use.

(10) Petroleum-contaminated media and debris that fail the test for the Toxicity Characteristic of Section R315-261-24, Hazardous Waste Codes D018 through D043 only, and are subject to the corrective action regulations under Section R315-311-202-1 which adopts 40 CFR 280 by reference.

(11) Injected groundwater that is hazardous only because it exhibits the Toxicity Characteristic, Hazardous Waste Codes D018 through D043 only, in Section R315-261-24 that is reinjected through an underground injection well pursuant to free phase hydrocarbon recovery operations undertaken at petroleum refineries, petroleum marketing terminals, petroleum bulk plants, petroleum pipelines, and petroleum transportation spill sites until January 25, 1993. This extension applies to recovery operations in existence, or for which contracts have been issued, on or before March 25, 1991. For groundwater returned through infiltration galleries from such operations at petroleum refineries, marketing terminals, and bulk plants, until October 2, 1991. New operations involving injection wells, beginning after March 25, 1991, will qualify for this compliance date extension, until January 25, 1993, only if:

(i) Operations are performed pursuant to a written state agreement that includes a provision to assess the groundwater and the need for further remediation once the free phase recovery is completed; and

(ii) A copy of the written agreement has been submitted to: Waste Identification Branch (5304), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460 and the Division of Waste Management and Radiation Control, PO Box 144880, Salt Lake City, UT 84114-4880.

(12) Used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, including mobile air conditioning systems, mobile refrigeration, and commercial and industrial air conditioning and refrigeration systems that use chlorofluorocarbons as the heat transfer fluid in a refrigeration cycle, provided the refrigerant is reclaimed for further use.

(13) Non-terne plated used oil filters that are not mixed with wastes listed in Sections R315-261-30 through R315-261-35 if these oil filters have been gravity hot-drained using one of the following methods:

(i) Puncturing the filter anti-drain back valve or the filter dome end and hot-draining;

(ii) Hot-draining and crushing;

(iii) Dismantling and hot-draining; or

(iv) Any other equivalent hot-draining method that will remove used oil.

(14) Used oil re-refining distillation bottoms that are used

as feedstock to manufacture asphalt products.

(15) Leachate or gas condensate collected from landfills where certain solid wastes have been disposed, provided that:

(i) The solid wastes disposed would meet one or more of the listing descriptions for Hazardous Waste Codes K169, K170, K171, K172, K174, K175, K176, K177, K178 and K181 if these wastes had been generated after the effective date of the listing;

(ii) The solid wastes described in Subsection R315-261-4(b)(15)(i) were disposed prior to the effective date of the listing;

(iii) The leachate or gas condensate do not exhibit any characteristic of hazardous waste nor are derived from any other listed hazardous waste;

(iv) Discharge of the leachate or gas condensate, including leachate or gas condensate transferred from the landfill to a POTW by truck, rail, or dedicated pipe, is subject to regulation under sections 307(b) or 402 of the Clean Water Act.

(v) As of February 13, 2001, leachate or gas condensate derived from K169-K172 is no longer exempt if it is stored or managed in a surface impoundment prior to discharge. As of November 21, 2003, leachate or gas condensate derived from K176, K177, and K178 is no longer exempt if it is stored or managed in a surface impoundment prior to discharge. After February 26, 2007, leachate or gas condensate derived from K181 will no longer be exempt if it is stored or managed in a surface impoundment prior to discharge. There is one exception: if the surface impoundment is used to temporarily store leachate or gas condensate in response to an emergency situation, e.g., shutdown of wastewater treatment system, provided the impoundment has a double liner, and provided the leachate or gas condensate is removed from the impoundment and continues to be managed in compliance with the conditions of Subsection R315-261-4(b)(15)(v) after the emergency ends.

(16) Reserved

(17) Reserved

(18) Solvent-contaminated wipes, except for wipes that are hazardous waste due to the presence of trichloroethylene, that are sent for disposal are not hazardous wastes from the point of generation provided that

(i) The solvent-contaminated wipes, when accumulated, stored, and transported, are contained in non-leaking, closed containers that are labeled "Excluded Solvent-Contaminated Wipes." The containers shall be able to contain free liquids, should free liquids occur. During accumulation, a container is considered closed when there is complete contact between the fitted lid and the rim, except when it is necessary to add or remove solvent-contaminated wipes. When the container is full, or when the solvent-contaminated wipes are no longer being accumulated, or when the container is being transported, the container shall be sealed with all lids properly and securely affixed to the container and all openings tightly bound or closed sufficiently to prevent leaks and emissions;

(ii) The solvent-contaminated wipes may be accumulated by the generator for up to 180 days from the start date of accumulation for each container prior to being sent for disposal;

(iii) At the point of being transported for disposal, the solvent-contaminated wipes shall contain no free liquids as defined in Section R315-260-10.

(iv) Free liquids removed from the solvent-contaminated wipes or from the container holding the wipes shall be managed according to the applicable regulations found in Rules R315-260 through 266, 268, 270 and 273;

(v) Generators shall maintain at their site the following documentation:

(A) Name and address of the landfill or combustor that is receiving the solvent-contaminated wipes;

(B) Documentation that the 180 day accumulation time limit in Subsection R315-261-4(b)(18)(ii) is being met;

(C) Description of the process the generator is using to ensure solvent-contaminated wipes contain no free liquids at the point of being transported for disposal;

(vi) The solvent-contaminated wipes are sent for disposal

(A) To a solid waste landfill that:

(1) is regulated under R315-301 through R315-320

(2) is a Class I or V Landfill; and

(3) has a composite liner; or

(B) To a hazardous waste landfill regulated under Rules R315-260 through 266, 268, and 270; or

(C) To a municipal waste combustor or other combustion facility regulated under section 129 of the Clean Air Act or to a hazardous waste combustor, boiler, or industrial furnace regulated under Rule R315-264, Rule R315-265, or Sections R315-266-100 through R315-266-112.

(c) Hazardous wastes which are exempted from certain regulations. A hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated non-waste-treatment-manufacturing unit, is not subject to regulation under Rules R315-262 through 265, 268, 270, and 124 or to the notification requirements of section 3010 of RCRA until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials.

(d)(1) Samples. Except as provided in Subsection R315-261-4(d)(2), a sample of solid waste or a sample of water, soil, or air, which is collected for the sole purpose of testing to determine its characteristics or composition, is not subject to any requirements of Rules R315-261 through 266, 268 or 270 or 124 or to the notification requirements of Section 3010 of RCRA, when:

(i) The sample is being transported to a laboratory for the purpose of testing; or

(ii) The sample is being transported back to the sample collector after testing; or

(iii) The sample is being stored by the sample collector before transport to a laboratory for testing; or

(iv) The sample is being stored in a laboratory before testing; or

(v) The sample is being stored in a laboratory after testing but before it is returned to the sample collector; or

(vi) The sample is being stored temporarily in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary).

(2) In order to qualify for the exemption in Subsections R315-261-4(d)(1) (i) and (ii), a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector shall:

(i) Comply with U.S. Department of Transportation (DOT), U.S. Postal Service (USPS), or any other applicable shipping requirements; or

(ii) Comply with the following requirements if the sample collector determines that DOT, USPS, or other shipping requirements do not apply to the shipment of the sample:

(A) Assure that the following information accompanies the sample:

(I) The sample collector's name, mailing address, and telephone number;

(II) The laboratory's name, mailing address, and telephone number;

(III) The quantity of the sample;

(IV) The date of shipment; and

(V) A description of the sample.

(B) Package the sample so that it does not leak, spill, or

vaporize from its packaging.

(3) This exemption does not apply if the laboratory determines that the waste is hazardous but the laboratory is no longer meeting any of the conditions stated in Subsection R315-261-4(d)(1).

(e)(1) **Treatability Study Samples.** Except as provided in Subsection R315-261-4(e)(2), persons who generate or collect samples for the purpose of conducting treatability studies as defined in Section R315-260-10, are not subject to any requirement of Rules R315-261 through 263 or to the notification requirements of Section 3010 of RCRA, nor are such samples included in the quantity determinations of Section R315-261-5 and Subsection R315-262-34(d) when:

(i) The sample is being collected and prepared for transportation by the generator or sample collector; or

(ii) The sample is being accumulated or stored by the generator or sample collector prior to transportation to a laboratory or testing facility; or

(iii) The sample is being transported to the laboratory or testing facility for the purpose of conducting a treatability study.

(2) The exemption in Subsection R315-261-4(e)(1) is applicable to samples of hazardous waste being collected and shipped for the purpose of conducting treatability studies provided that:

(i) The generator or sample collector uses (in "treatability studies") no more than 10,000 kg of media contaminated with non-acute hazardous waste, 1000 kg of non-acute hazardous waste other than contaminated media, 1 kg of acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste for each process being evaluated for each generated waste stream; and

(ii) The mass of each sample shipment does not exceed 10,000 kg; the 10,000 kg quantity may be all media contaminated with non-acute hazardous waste, or may include 2500 kg of media contaminated with acute hazardous waste, 1000 kg of hazardous waste, and 1 kg of acute hazardous waste; and

(iii) The sample shall be packaged so that it will not leak, spill, or vaporize from its packaging during shipment and the requirements of Subsections R315-261-4(e)(2)(iii)(A) or (B) are met.

(A) The transportation of each sample shipment complies with U.S. Department of Transportation (DOT), U.S. Postal Service (USPS), or any other applicable shipping requirements; or

(B) If the DOT, USPS, or other shipping requirements do not apply to the shipment of the sample, the following information shall accompany the sample:

(I) The name, mailing address, and telephone number of the originator of the sample;

(II) The name, address, and telephone number of the facility that will perform the treatability study;

(III) The quantity of the sample;

(IV) The date of shipment; and

(V) A description of the sample, including its EPA Hazardous Waste Number.

(iv) The sample is shipped to a laboratory or testing facility which is exempt under Subsection R315-261-4(f) or has an appropriate RCRA permit or interim status.

(v) The generator or sample collector maintains the following records for a period ending three years after completion of the treatability study:

(A) Copies of the shipping documents;

(B) A copy of the contract with the facility conducting the treatability study;

(C) Documentation showing:

(I) The amount of waste shipped under this exemption;

(II) The name, address, and EPA identification number of the laboratory or testing facility that received the waste;

(III) The date the shipment was made; and

(IV) Whether or not unused samples and residues were returned to the generator.

(vi) The generator reports the information required under Subsection R315-261-4(e)(2)(v)(C) in its biennial report.

(3) The Director may grant requests on a case-by-case basis for up to an additional two years for treatability studies involving bioremediation. The Director may grant requests on a case-by-case basis for quantity limits in excess of those specified in Subsections R315-261-4(e)(2)(i) and (ii) and Subsection R315-261-4(f)(4), for up to an additional 5000 kg of media contaminated with non-acute hazardous waste, 500 kg of non-acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste and 1 kg of acute hazardous waste:

(i) In response to requests for authorization to ship, store and conduct treatability studies on additional quantities in advance of commencing treatability studies. Factors to be considered in reviewing such requests include the nature of the technology; the type of process, e.g., batch versus continuous; size of the unit undergoing testing, particularly in relation to scale-up considerations; the time/quantity of material required to reach steady state operating conditions; or test design considerations such as mass balance calculations.

(ii) In response to requests for authorization to ship, store and conduct treatability studies on additional quantities after initiation or completion of initial treatability studies, when: There has been an equipment or mechanical failure during the conduct of a treatability study; there is a need to verify the results of a previously conducted treatability study; there is a need to study and analyze alternative techniques within a previously evaluated treatment process; or there is a need to do further evaluation of an ongoing treatability study to determine final specifications for treatment.

(iii) The additional quantities and timeframes allowed in Subsections R315-261-4(e)(3)(i) and (ii) are subject to all the provisions in Subsections R315-261-4(e)(1) and (e)(2)(iii) through (vi). The generator or sample collector shall apply to the Director and provide in writing the following information:

(A) The reason why the generator or sample collector requires additional time or quantity of sample for treatability study evaluation and the additional time or quantity needed;

(B) Documentation accounting for all samples of hazardous waste from the waste stream which have been sent for or undergone treatability studies including the date each previous sample from the waste stream was shipped, the quantity of each previous shipment, the laboratory or testing facility to which it was shipped, what treatability study processes were conducted on each sample shipped, and the available results on each treatability study;

(C) A description of the technical modifications or change in specifications which will be evaluated and the expected results;

(D) If such further study is being required due to equipment or mechanical failure, the applicant shall include information regarding the reason for the failure or breakdown and also include what procedures or equipment improvements have been made to protect against further breakdowns; and

(E) Such other information that the Director considers necessary.

(f) **Samples Undergoing Treatability Studies at Laboratories and Testing Facilities.** Samples undergoing treatability studies and the laboratory or testing facility conducting such treatability studies, to the extent such facilities are not otherwise subject to RCRA requirements, are not subject to any requirement of Rules R315-261 through 266, 268 and 270, or to the notification requirements of Section 3010 of RCRA provided that the conditions of Subsection R315-261-4(f)(1) through (11) are met. A mobile treatment unit (MTU) may qualify as a testing facility subject to Subsections R315-

261-4(f)(1) through (11). Where a group of MTUs are located at the same site, the limitations specified in Subsections R315-261-4(f)(1) through (11) apply to the entire group of MTUs collectively as if the group were one MTU.

(1) No less than 45 days before conducting treatability studies, the facility notifies the Director, in writing that it intends to conduct treatability studies under Subsection R315-261-4(f).

(2) The laboratory or testing facility conducting the treatability study has an EPA identification number.

(3) No more than a total of 10,000 kg of "as received" media contaminated with non-acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste or 250 kg of other "as received" hazardous waste is subject to initiation of treatment in all treatability studies in any single day. "As received" waste refers to the waste as received in the shipment from the generator or sample collector.

(4) The quantity of "as received" hazardous waste stored at the facility for the purpose of evaluation in treatability studies does not exceed 10,000 kg, the total of which can include 10,000 kg of media contaminated with non-acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste, 1000 kg of non-acute hazardous wastes other than contaminated media, and 1 kg of acute hazardous waste. This quantity limitation does not include treatment materials, including nonhazardous solid waste, added to "as received" hazardous waste.

(5) No more than 90 days have elapsed since the treatability study for the sample was completed, or no more than one year, two years for treatability studies involving bioremediation, have elapsed since the generator or sample collector shipped the sample to the laboratory or testing facility, whichever date first occurs. Up to 500 kg of treated material from a particular waste stream from treatability studies may be archived for future evaluation up to five years from the date of initial receipt. Quantities of materials archived are counted against the total storage limit for the facility.

(6) The treatability study does not involve the placement of hazardous waste on the land or open burning of hazardous waste.

(7) The facility maintains records for three years following completion of each study that show compliance with the treatment rate limits and the storage time and quantity limits. The following specific information shall be included for each treatability study conducted:

(i) The name, address, and EPA identification number of the generator or sample collector of each waste sample;

(ii) The date the shipment was received;

(iii) The quantity of waste accepted;

(iv) The quantity of "as received" waste in storage each day;

(v) The date the treatment study was initiated and the amount of "as received" waste introduced to treatment each day;

(vi) The date the treatability study was concluded;

(vii) The date any unused sample or residues generated from the treatability study were returned to the generator or sample collector or, if sent to a designated facility, the name of the facility and the EPA identification number.

(8) The facility keeps, on-site, a copy of the treatability study contract and all shipping papers associated with the transport of treatability study samples to and from the facility for a period ending three years from the completion date of each treatability study.

(9) The facility prepares and submits a report to the Director, by March 15 of each year, that includes the following information for the previous calendar year:

(i) The name, address, and EPA identification number of the facility conducting the treatability studies;

(ii) The types (by process) of treatability studies

conducted;

(iii) The names and addresses of persons for whom studies have been conducted, including their EPA identification numbers;

(iv) The total quantity of waste in storage each day;

(v) The quantity and types of waste subjected to treatability studies;

(vi) When each treatability study was conducted;

(vii) The final disposition of residues and unused sample from each treatability study.

(10) The facility determines whether any unused sample or residues generated by the treatability study are hazardous waste under Section R315-261-3 and, if so, are subject to Rules R315-261 through 268 and 270, unless the residues and unused samples are returned to the sample originator under the Subsection R315-261-4(e) exemption.

(11) The facility notifies the Director, by letter when the facility is no longer planning to conduct any treatability studies at the site.

(g) Dredged material that is not a hazardous waste. Dredged material that is subject to the requirements of a permit that has been issued under 404 of the Federal Water Pollution Control Act (33 U.S.C.1344) or section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413) is not a hazardous waste. For Subsection R315-261-4(g), the following definitions apply:

(1) The term dredged material has the same meaning as defined in 40 CFR 232.2;

(2) The term permit means:

(i) A permit issued by the U.S. Army Corps of Engineers (Corps) or an approved State under section 404 of the Federal Water Pollution Control Act (33 U.S.C. 1344);

(ii) A permit issued by the Corps under section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413); or

(iii) In the case of Corps civil works projects, the administrative equivalent of the permits referred to in Subsections R315-261-4(g)(2)(i) and (ii), as provided for in Corps regulations.

(h) Carbon dioxide stream injected for geologic sequestration. Carbon dioxide streams that are captured and transported for purposes of injection into an underground injection well subject to the requirements for Class VI Underground Injection Control wells, including the requirements in Rule R317-7, are not a hazardous waste, provided the following conditions are met:

(1) Transportation of the carbon dioxide stream shall be in compliance with U.S. Department of Transportation requirements, including the pipeline safety laws, 49 U.S.C. 60101 et seq. and regulations, 49 CFR Parts 190-199, of the U.S. Department of Transportation, and pipeline safety regulations adopted and administered by a state authority pursuant to a certification under 49 U.S.C. 60105, as applicable.

(2) Injection of the carbon dioxide stream shall be in compliance with the applicable requirements for Class VI Underground Injection Control wells, including the applicable requirements in Rule R317-7;

(3) No hazardous wastes shall be mixed with, or otherwise co-injected with, the carbon dioxide stream; and

(4)(i) Any generator of a carbon dioxide stream, who claims that a carbon dioxide stream is excluded under Subsection R315-261-4(h), shall have an authorized representative, as defined in Section R315-260-10, sign a certification statement worded as follows: I certify under penalty of law that the carbon dioxide stream that I am claiming to be excluded under Subsection R315-261.4(h) has not been mixed with hazardous wastes, and I have transported the carbon dioxide stream in compliance with, or have contracted with a

pipeline operator or transporter to transport the carbon dioxide stream in compliance with, Department of Transportation requirements, including the pipeline safety laws, 49 U.S.C. 60101 et seq., and regulations, 49 CFR Parts 190-199, of the U.S. Department of Transportation, and the pipeline safety regulations adopted and administered by a state authority pursuant to a certification under 49 U.S.C. 60105, as applicable, for injection into a well subject to the requirements for the Class VI Underground Injection Control Program of Rule R317-7.

(ii) Any Class VI Underground Injection Control well owner or operator, who claims that a carbon dioxide stream is excluded under Subsection R315-261-4(h), shall have an authorized representative, as defined in Section R315-260-10, sign a certification statement worded as follows: I certify under penalty of law that the carbon dioxide stream that I am claiming to be excluded under Subsection R315-261-4(h) has not been mixed with, or otherwise co-injected with, hazardous waste at the Underground Injection Control (UIC) Class VI permitted facility, and that injection of the carbon dioxide stream is in compliance with the applicable requirements for UIC Class VI wells, including the applicable requirements in Rule R317-7.

(iii) The signed certification statement shall be kept on-site for no less than three years, and shall be made available within 72 hours of a written request from the Director. The signed certification statement shall be renewed every year that the exclusion is claimed, by having an authorized representative, as defined in Section R315-260-10, annually prepare and sign a new copy of the certification statement within one year of the date of the previous statement. The signed certification statement shall also be readily accessible on the facility's publicly-available Web site, if such Web site exists, as a public notification with the title of "Carbon Dioxide Stream Certification" at the time the exclusion is claimed.

R315-261-5. Special Requirements for Hazardous Waste Generated by Conditionally Exempt Small Quantity Generators.

(a) A generator is a conditionally exempt small quantity generator in a calendar month if he generates no more than 100 kilograms of hazardous waste in that month.

(b) Except for those wastes identified in Subsections R315-261-5(e), (f), (g), and (j), a conditionally exempt small quantity generator's hazardous wastes are not subject to regulation under Rules R315-262 through 268, 270 and 124, and the notification requirements of section 3010 of RCRA, provided the generator complies with the requirements of Subsections R315-261-5(f), (g), and (j).

(c) When making the quantity determinations of Rules R315-261 and 262, the generator shall include all hazardous waste that it generates, except hazardous waste that:

(1) Is exempt from regulation under Subsections R315-261-4(c) through (f), R315-261-6(a)(3), R315-261-7(a)(1), or R315-261-8; or

(2) Is managed immediately upon generation only in on-site elementary neutralization units, wastewater treatment units, or totally enclosed treatment facilities as defined in Section R315-260-10; or

(3) Is recycled, without prior storage or accumulation, only in an on-site process subject to regulation under Subsection R315-261-6(c)(2); or

(4) Is used oil managed under the requirements of Subsection R315-261-6(a)(4) and Rule R315-15; or

(5) Is spent lead-acid batteries managed under the requirements of Section R315-266-80; or

(6) Is universal waste managed under Section R315-261-9 and Rule R315-273;

(7) Is a hazardous waste that is an unused commercial chemical product, listed in Sections R315-261-30 through 35 or

exhibiting one or more characteristics in Sections R315-261-20 through 24, that is generated solely as a result of a laboratory clean-out conducted at an eligible academic entity pursuant to Section R315-262-213. For purposes of this provision, the term eligible academic entity shall have the meaning as defined in Section R315-262-200.

(d) In determining the quantity of hazardous waste generated, a generator need not include:

(1) Hazardous waste when it is removed from on-site storage; or

(2) Hazardous waste produced by on-site treatment, including reclamation, of his hazardous waste, so long as the hazardous waste that is treated was counted once; or

(3) Spent materials that are generated, reclaimed, and subsequently reused on-site, so long as such spent materials have been counted once.

(e) If a generator generates acute hazardous waste in a calendar month in quantities greater than set forth below, all quantities of that acute hazardous waste are subject to full regulation under Rules R315-262 through 268, 270 and 124, and the notification requirements of section 3010 of RCRA:

(1) A total of one kilogram of acute hazardous wastes listed in Section R315-261-31 or Subsection R315-261-33(e).

(2) A total of 100 kilograms of any residue or contaminated soil, waste, or other debris resulting from the clean-up of a spill, into or on any land or water, of any acute hazardous wastes listed in Section R315-261-31 or Subsection R315-261-33(e).

Note to Subsection R315-261-33(e): "Full regulation" means those regulations applicable to generators of 1,000 kg or greater of hazardous waste in a calendar month.

(f) In order for acute hazardous wastes generated by a generator of acute hazardous wastes in quantities equal to or less than those set forth in Subsections R315-261-5(e)(1) or (2) to be excluded from full regulation under Section R315-261-5, the generator shall comply with the following requirements:

(1) Section R315-262-11;

(2) The generator may accumulate acute hazardous waste on-site. If he accumulates at any time acute hazardous wastes in quantities greater than those set forth in Subsections R315-261-(e)(1) or (2), all of those accumulated wastes are subject to regulation under Rules R315-262 through 266, 268, 270 and 124, and the applicable notification requirements of section 3010 of RCRA. The time period of Subsection R315-262-34(a), for accumulation of wastes on-site, begins when the accumulated wastes exceed the applicable exclusion limit;

(3) A conditionally exempt small quantity generator may either treat or dispose of his acute hazardous waste in an on-site facility or ensure delivery to an off-site treatment, storage, or disposal facility, either of which, if located in the U.S., is:

(i) Permitted under Rule R315-270;

(ii) In interim status under Rules R315-270 and 265;

(iii) Authorized to manage hazardous waste by a State with a hazardous waste management program approved under 40 CFR 271;

(iv) Permitted, licensed, or registered by a State to manage municipal solid waste and, if managed in a municipal solid waste landfill is subject to Rules R315-301 through 320;

(v) Permitted, licensed, or registered by a State to manage non-municipal non-hazardous waste and, if managed in a non-municipal non-hazardous waste disposal unit after January 1, 1998, is subject to the requirements in 40 CFR 257.5 through 257.30; or

(vi) A facility which:

(A) Beneficially uses or reuses, or legitimately recycles or reclaims its waste; or

(B) Treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation; or

(vii) For universal waste managed under Rule R315-273,

a universal waste handler or destination facility subject to the requirements of Rule R315-273.

(g) In order for hazardous waste generated by a conditionally exempt small quantity generator in quantities of 100 kilograms or less of hazardous waste during a calendar month to be excluded from full regulation under Section R316-261-5, the generator shall comply with the following requirements:

(1) Section R315-262-11;

(2) The conditionally exempt small quantity generator may accumulate hazardous waste on-site. If he accumulates at any time 1,000 kilograms or greater of his hazardous wastes, all of those accumulated wastes are subject to regulation under the special provisions of Rule R315-262 applicable to generators of greater than 100 kg and less than 1000 kg of hazardous waste in a calendar month as well as the requirements of Rules R315-263 through 266, 268, 270 and 124, and the applicable notification requirements of section 3010 of RCRA. The time period of Subsection R315-262-34(d) for accumulation of wastes on-site begins for a conditionally exempt small quantity generator when the accumulated wastes equal or exceed 1000 kilograms;

(3) A conditionally exempt small quantity generator may either treat or dispose of his hazardous waste in an on-site facility or ensure delivery to an off-site treatment, storage or disposal facility, either of which, if located in the U.S., is:

(i) Permitted under Rule R315-270;

(ii) In interim status under Rules R315-265 and 270;

(iii) Authorized to manage hazardous waste by a State with a hazardous waste management program approved under 40 CFR 271;

(iv) Permitted, licensed, or registered to manage municipal solid waste and, if managed in a municipal solid waste landfill is subject to Rules R315-301 through 320;

(v) Permitted, licensed, or registered by a State to manage non-municipal non-hazardous waste and, if managed in a non-municipal non-hazardous waste disposal unit after January 1, 1998, is subject to the requirements in 40 CFR 257.5 through 257.30; or

(vi) A facility which:

(A) Beneficially uses or reuses, or legitimately recycles or reclaims its waste; or

(B) Treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation; or

(vii) For universal waste managed under Rule R315-273, a universal waste handler or destination facility subject to the requirements of Rule R315-273.

(h) Hazardous waste subject to the reduced requirements of Section R315-261-5 may be mixed with non-hazardous waste and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity limitations identified in Section R315-261-5, unless the mixture meets any of the characteristics of hazardous waste identified in Sections R315-261-20 through 24.

(i) If any person mixes a solid waste with a hazardous waste that exceeds a quantity exclusion level of Section R315-261-5, the mixture is subject to full regulation.

(j) If a conditionally exempt small quantity generator's wastes are mixed with used oil, the mixture is subject to Rule R315-15. Any material produced from such a mixture by processing, blending, or other treatment is also so regulated.

R315-261-6. Requirements for Recyclable Materials.

(a)(1) Hazardous wastes that are recycled are subject to the requirements for generators, transporters, and storage facilities of Subsections R315-261-6(b) and (c), except for the materials listed in Subsections R315-261-6(a)(2) and (a)(3). Hazardous wastes that are recycled shall be known as "recyclable materials."

(2) The following recyclable materials are not subject to

the requirements of Section R315-261-6 but are regulated under Sections R315-266-20 through 23, Section R315-266-70, Section R315-266-80, Sections R315-266-100 through 112, Sections R315-266-200 through 206, and Sections R315-266-210, 220, 225, 230, 235, 240, 245, 250, 255, 260, 310, 315, 320, 325, 330, 335, 340, 345, 350, 355, and 360 and all applicable provisions in Rules R315-268, 270 and 124.

(i) Recyclable materials used in a manner constituting disposal, Sections R315-266-20 through 23;

(ii) Hazardous wastes burned, as defined in Subsection R315-266-100(a), in boilers and industrial furnaces that are not regulated under Sections R315-264-340 through 345, 347 and 351; Sections R315-370, 373, 375, 377, and 381 through 383; and Section R315-266-100 through 112;

(iii) Recyclable materials from which precious metals are reclaimed, Section R315-266-70;

(iv) Spent lead-acid batteries that are being reclaimed, Section R315-266-80.

(3) The following recyclable materials are not subject to regulation under Rules R315-262 through 268, 270 and 124, and are not subject to the notification requirements of section 3010 of RCRA:

(i) Industrial ethyl alcohol that is reclaimed except that, unless provided otherwise in an international agreement as specified in Section R315-262-58:

(A) A person initiating a shipment for reclamation in a foreign country, and any intermediary arranging for the shipment, shall comply with the requirements applicable to a primary exporter in Section R315-262-53, Subsections R315-262-56(a)(1) through (4), (6), and (b), and Section R315-262-57, export such materials only upon consent of the receiving country and in conformance with the EPA Acknowledgment of Consent as defined in Sections R315-262-50 through 58, and provide a copy of the EPA Acknowledgment of Consent to the shipment to the transporter transporting the shipment for export;

(B) Transporters transporting a shipment for export may not accept a shipment if he knows the shipment does not conform to the EPA Acknowledgment of Consent, shall ensure that a copy of the EPA Acknowledgment of Consent accompanies the shipment and shall ensure that it is delivered to the facility designated by the person initiating the shipment.

(ii) Scrap metal that is not excluded under Subsection R315-261-4(a)(13);

(iii) Fuels produced from the refining of oil-bearing hazardous waste along with normal process streams at a petroleum refining facility if such wastes result from normal petroleum refining, production, and transportation practices, this exemption does not apply to fuels produced from oil recovered from oil-bearing hazardous waste, where such recovered oil is already excluded under Subsection R315-261-4(a)(12);

(iv)(A) Hazardous waste fuel produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices, or produced from oil reclaimed from such hazardous wastes, where such hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil so long as the resulting fuel meets the used oil specification under Subsection R315-15-1.2(c) and so long as no other hazardous wastes are used to produce the hazardous waste fuel;

(B) Hazardous waste fuel produced from oil-bearing hazardous waste from petroleum refining production, and transportation practices, where such hazardous wastes are reintroduced into a refining process after a point at which contaminants are removed, so long as the fuel meets the used oil fuel specification under Subsection R315-15-1.2(c); and

(C) Oil reclaimed from oil-bearing hazardous wastes from petroleum refining, production, and transportation practices, which reclaimed oil is burned as a fuel without reintroduction to a refining process, so long as the reclaimed oil meets the used

oil fuel specification under Subsection R315-15-1.2(c).

(4) Used oil that is recycled and is also a hazardous waste solely because it exhibits a hazardous characteristic is not subject to the requirements of Rules R315-260 through 268, but is regulated under Rule R315-15. Used oil that is recycled includes any used oil which is reused, following its original use, for any purpose, including the purpose for which the oil was originally used. Such term includes, but is not limited to, oil which is re-refined, reclaimed, burned for energy recovery, or reprocessed.

(5) Hazardous waste that is exported to or imported from designated member countries of the Organization for Economic Cooperation and Development (OECD), as defined in Subsection R315-262-58(a)(1), for purpose of recovery is subject to the requirements of Sections R315-262-80 through 87 and 89, if it is subject to either the manifesting requirements of Rule R315-262, to the universal waste management standards of Rule R315-273.

(b) Generators and transporters of recyclable materials are subject to the applicable requirements of Rules R315-262 and 263 and the notification requirements under section 3010 of RCRA, except as provided in Subsection R315-261-6(a).

(c)(1) Owners and operators of facilities that store recyclable materials before they are recycled are regulated under all applicable provisions of Rules R315-264 and 265, and under Rules R315-266, 268, 270 and 124 and the notification requirements under section 3010 of RCRA, except as provided in Subsection R315-261-6(a). The recycling process itself is exempt from regulation except as provided in Subsection R315-261-6(d).

(2) Owners or operators of facilities that recycle recyclable materials without storing them before they are recycled are subject to the following requirements, except as provided in R315-261-6(a):

(i) Notification requirements under section 3010 of RCRA;

(ii) 40 CFR 265.71 and 72, which are adopted by reference; dealing with the use of the manifest and manifest discrepancies.

(iii) Subsection R315-261-6(d).

(d) Owners or operators of facilities subject to permitting requirements under Section 19-6-108 with hazardous waste management units that recycle hazardous wastes are subject to the requirements of Sections R315-264-1030 through 1036; Sections R315-264-1050 through 1065; 40 CFR 265.1030 through 1035, which are adopted and incorporated by reference; or 40 CFR 265.1050 through 1064, which are adopted and incorporated by reference.

R315-261-7. Residues of Hazardous Waste in Empty Containers.

(a)(1) Any hazardous waste remaining in either: an empty container; or an inner liner removed from an empty container, as defined in Subsection R315-261-7(b), is not subject to regulation under Rules R315-261 through 266, 268, 270 or 124 or to the notification requirements of section 3010 of RCRA.

(2) Any hazardous waste in either a container that is not empty or an inner liner removed from a container that is not empty, as defined in Subsection R315-261-7(b), is subject to regulation under Rules R315-261 through 266, 268, 270 and 124 and to the notification requirements of section 3010 of RCRA.

(b)(1) A container or an inner liner removed from a container that has held any hazardous waste, except a waste that is a compressed gas or that is identified as an acute hazardous waste listed in Section R315-261-31 or Subsection R315-261-33(e) is empty if:

(i) All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and

aspirating, and

(ii) No more than 2.5 centimeters, one inch, of residue remain on the bottom of the container or inner liner, or

(iii)(A) No more than three percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 119 gallons in size; or

(B) No more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 119 gallons in size.

(2) A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric.

(3) A container or an inner liner removed from a container that has held an acute hazardous waste listed in Section R315-261-31 or Subsection R315-261-33(e) is empty if:

(i) The container or inner liner has been triple rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;

(ii) The container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or

(iii) In the case of a container, the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container, has been removed.

R315-261-8. PCB Wastes Regulated Under Toxic Substance Control Act.

The disposal of PCB-containing dielectric fluid and electric equipment containing such fluid authorized for use and regulated under 40 CFR 761 and that are hazardous only because they fail the test for the Toxicity Characteristic. Hazardous Waste Codes D018 through D043 only, are exempt from regulation under Rules R315-261 through 265, 268, 270 and 124, and the notification requirements of section 3010 of RCRA.

R315-261-9. Requirements for Universal Waste.

The wastes listed in Section R315-261-9 are exempt from regulation under Rules R315-262 through 270 except as specified in Rule R315-273 and, therefore are not fully regulated as hazardous waste. The wastes listed in Section R315-261-9 are subject to regulation under Rule R315-273:

(a) Batteries as described in Section R315-273-2;

(b) Pesticides as described in Section R315-273-3;

(c) Mercury-containing equipment as described in Section R315-273-4; and

(d) Lamps as described in Section R315-273-5.

(e) Antifreeze as described in Subsection R315-273-6(a).

(f) Aerosol cans as described in Subsection R315-273-6(b).

R315-261-10. Criteria for Identifying the Characteristics of Hazardous Waste.

(a) The Board shall identify and define a characteristic of hazardous waste in Sections R315-261-20 through 24 only upon determining that:

(1) A solid waste that exhibits the characteristic may:

(i) Cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

(ii) Pose a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed of or otherwise managed; and

(2) The characteristic can be:

(i) Measured by an available standardized test method which is reasonably within the capability of generators of solid waste or private sector laboratories that are available to serve

generators of solid waste; or

(ii) Reasonably detected by generators of solid waste through their knowledge of their waste.

R315-261-11. Criteria for Listing Hazardous Waste.

(a) The Board shall list a solid waste as a hazardous waste only upon determining that the solid waste meets one of the following criteria:

(1) It exhibits any of the characteristics of hazardous waste identified in Sections R315-261-20 through 24.

(2) It has been found to be fatal to humans in low doses or, in the absence of data on human toxicity, it has been shown in studies to have an oral LD 50 toxicity, rat, of less than 50 milligrams per kilogram, an inhalation LC 50 toxicity, rat, of less than 2 milligrams per liter, or a dermal LD 50 toxicity, rabbit, of less than 200 milligrams per kilogram or is otherwise capable of causing or significantly contributing to an increase in serious irreversible, or incapacitating reversible, illness. Waste listed in accordance with these criteria shall be designated Acute Hazardous Waste.

(3) It contains any of the toxic constituents listed in Rule R315-261 appendix VIII and, after considering the following factors, the Board concludes that the waste is capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed:

(i) The nature of the toxicity presented by the constituent.

(ii) The concentration of the constituent in the waste.

(iii) The potential of the constituent or any toxic degradation product of the constituent to migrate from the waste into the environment under the types of improper management considered in Subsection R315-261-11(a)(3)(vii).

(iv) The persistence of the constituent or any toxic degradation product of the constituent.

(v) The potential for the constituent or any toxic degradation product of the constituent to degrade into non-harmful constituents and the rate of degradation.

(vi) The degree to which the constituent or any degradation product of the constituent bioaccumulates in ecosystems.

(vii) The plausible types of improper management to which the waste could be subjected.

(viii) The quantities of the waste generated at individual generation sites or on a regional or national basis.

(ix) The nature and severity of the human health and environmental damage that has occurred as a result of the improper management of wastes containing the constituent.

(x) Action taken by other governmental agencies or regulatory programs based on the health or environmental hazard posed by the waste or waste constituent.

(xi) Such other factors as may be appropriate. Substances shall be listed on appendix VIII of Rule R315-261 only if they have been shown in scientific studies to have toxic, carcinogenic, mutagenic or teratogenic effects on humans or other life forms. Wastes listed in accordance with these criteria shall be designated Toxic wastes.

(b) The Board may list classes or types of solid waste as hazardous waste if it has reason to believe that individual wastes, within the class or type of waste, typically or frequently are hazardous under the definition of hazardous waste found in Section 19-6-102.

(c) The Board shall use the criteria for listing specified in Section R315-261-11 to establish the exclusion limits referred to in Subsection R315-261-5(c).

R315-261-20. Characteristics of Hazardous Waste - General.

(a) A solid waste, as defined in Section R315-261-2, which is not excluded from regulation as a hazardous waste under Subsection R315-261-4(b), is a hazardous waste if it

exhibits any of the characteristics identified in Sections R315-261-20 through 24.

(b) A hazardous waste which is identified by a characteristic in Sections R315-261-20 through 24 is assigned every EPA Hazardous Waste Number that is applicable as set forth in Sections R315-261-20 through 24. This number shall be used in complying with the notification requirements of section 3010 of RCRA and all applicable recordkeeping and reporting requirements under Rules R315-262 through 265, 268 and 270.

(c) For purposes of Sections R315-261-20 through 24, the Board shall consider a sample obtained using any of the applicable sampling methods specified in appendix I of Rule R315-261 to be a representative sample within the meaning of Rule R315-260.

R315-261-21. Characteristics of Hazardous Waste - Characteristic of Ignitability.

(a) A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:

(1) It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume and has flash point less than 60 degrees C (140 degrees F), as determined by a Pensky-Martens Closed Cup Tester, using the test method specified in ASTM Standard D 93-79 or D 93-80, see Section R315-260-11, or a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D 3278-78, see Section R315-260-11.

(2) It is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.

(3) It is an ignitable compressed gas.

(i) The term "compressed gas" shall designate any material or mixture having in the container an absolute pressure exceeding 40 p.s.i. at 70 degrees Fahrenheit or, regardless of the pressure at 70 degrees Fahrenheit, having an absolute pressure exceeding 104 p.s.i. at 130 degrees Fahrenheit; or any liquid flammable material having a vapor pressure exceeding 40 p.s.i. absolute at 100 degrees Fahrenheit as determined by ASTM Test D-323.

(ii) A compressed gas shall be characterized as ignitable if any one of the following occurs:

(A) Either a mixture of 13 percent or less, by volume, with air forms a flammable mixture or the flammable range with air is wider than 12 percent regardless of the lower limit. These limits shall be determined at atmospheric temperature and pressure. The method of sampling and test procedure shall be acceptable to the Bureau of Explosives and approved by the director, Pipeline and Hazardous Materials Technology, U.S. Department of Transportation, see Note 2.

(B) Using the Bureau of Explosives' Flame Projection Apparatus, see Note 1, the flame projects more than 18 inches beyond the ignition source with valve opened fully, or, the flame flashes back and burns at the valve with any degree of valve opening.

(C) Using the Bureau of Explosives' Open Drum Apparatus, see Note 1, there is any significant propagation of flame away from the ignition source.

(D) Using the Bureau of Explosives' Closed Drum Apparatus, see Note 1, there is any explosion of the vapor-air mixture in the drum.

(4) It is an oxidizer. An oxidizer for the purpose of this subchapter is a substance such as a chlorate, permanganate, inorganic peroxide, or a nitrate, that yields oxygen readily to stimulate the combustion of organic matter (see Note 4).

(i) An organic compound containing the bivalent -O-O- structure and which may be considered a derivative of hydrogen

peroxide where one or more of the hydrogen atoms have been replaced by organic radicals shall be classed as an organic peroxide unless:

(A) The material meets the definition of a Class A explosive or a Class B explosive, as defined in Subsection R315-261-23(a)(8), in which case it shall be classed as an explosive,

(B) The material is forbidden to be offered for transportation according to 49 CFR 172.101 and 49 CFR 173.21,

(C) It is determined that the predominant hazard of the material containing an organic peroxide is other than that of an organic peroxide, or

(D) According to data on file with the Pipeline and Hazardous Materials Safety Administration in the U.S. Department of Transportation (see Note 3), it has been determined that the material does not present a hazard in transportation.

(b) A solid waste that exhibits the characteristic of ignitability has the EPA Hazardous Waste Number of D001.

Note 1: A description of the Bureau of Explosives' Flame Projection Apparatus, Open Drum Apparatus, Closed Drum Apparatus, and method of tests may be procured from the Bureau of Explosives.

Note 2: As part of a U.S. Department of Transportation (DOT) reorganization, the Office of Hazardous Materials Technology (OHMT), which was the office listed in the 1980 publication of 49 CFR 173.300 for the purposes of approving sampling and test procedures for a flammable gas, ceased operations on February 20, 2005. OHMT programs have moved to the Pipeline and Hazardous Materials Safety Administration (PHMSA) in the DOT.

Note 3: As part of a U.S. Department of Transportation (DOT) reorganization, the Research and Special Programs Administration (RSPA), which was the office listed in the 1980 publication of 49 CFR 173.151a for the purposes of determining that a material does not present a hazard in transport, ceased operations on February 20, 2005. RSPA programs have moved to the Pipeline and Hazardous Materials Safety Administration (PHMSA) in the DOT.

Note 4: The DOT regulatory definition of an oxidizer was contained in Section 173.151 of 49 CFR, and the definition of an organic peroxide was contained in paragraph 173.151a. An organic peroxide is a type of oxidizer.

R315-261-22. Characteristics of Hazardous Waste - Characteristic of Corrosivity.

(a) A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:

(1) It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using Method 9040C in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, see Section R315-260-11 which incorporates 40 CFR 260.11 by reference.

(2) It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55 degrees C (130 degrees F) as determined by Method 1110A in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, see Section R315-260-11 which incorporates 40 CFR 260.11 by reference.

(b) A solid waste that exhibits the characteristic of corrosivity has the EPA Hazardous Waste Number of D002.

R315-261-23. Characteristics of Hazardous Waste - Characteristic of Reactivity.

(a) A solid waste exhibits the characteristic of reactivity if

a representative sample of the waste has any of the following properties:

(1) It is normally unstable and readily undergoes violent change without detonating.

(2) It reacts violently with water.

(3) It forms potentially explosive mixtures with water.

(4) When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

(5) It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

(6) It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.

(7) It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

(8) It is a forbidden explosive as defined in 49 CFR 173.54, or is a Division 1.1, 1.2 or 1.3 explosive as defined in 49 CFR 173.50 and 173.53.

(b) A solid waste that exhibits the characteristic of reactivity has the EPA Hazardous Waste Number of D003.

R315-261-24. Characteristics of Hazardous Waste - Toxicity Characteristic.

(a) A solid waste (except manufactured gas plant waste) exhibits the characteristic of toxicity if, using the Toxicity Characteristic Leaching Procedure, test Method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, see Section R315-260-11, the extract from a representative sample of the waste contains any of the contaminants listed in Table 1 at the concentration equal to or greater than the respective value given in that Table 1. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering using the methodology outlined in Method 1311, is considered to be the extract for the purpose of Section R315-261-24.

(b) A solid waste that exhibits the characteristic of toxicity has the EPA Hazardous Waste Number specified in Table 1 which corresponds to the toxic contaminant causing it to be hazardous.

TABLE 1
Maximum Concentration of Contaminants for the
Toxicity Characteristic

PA HW(1)	Contaminant CAS(2)	Regulatory Level (mg/L)
D004 Arsenic	7440-38-2	5.0
D005 Barium	7440-39-3	100.0
D018 Benzene	71-43-2	0.5
D006 Cadmium	7440-43-9	1.0
D019 Carbon tetrachloride	56-23-5	0.5
D020 Chlordane	57-74-9	0.03
D021 Chlorobenzene	108-90-7	100.0
D022 Chloroform	67-66-3	6.0
D007 Chromium	7440-47-3	5.0
D023 o-Cresol	95-48-7	200.0(4)
D024 m-Cresol	108-39-4	200.0(4)
D025 p-Cresol	106-44-5	200.0(4)
D026 Cresol		200.0(4)
D016 2,4-D	94-75-7	10.0
D027 1,4-Dichlorobenzene	106-46-7	7.5
D028 1,2-Dichloroethane	107-06-2	0.5
D029 1,1-Dichloroethylene	75-35-4	0.7
D030 2,4-Dinitrotoluene	121-14-2	0.13(3)
D012 Endrin	72-20-8	0.02
D031 Heptachlor (and its epoxide)	76-44-8	0.008
D032 Hexachlorobenzene	118-74-1	0.13(3)

D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3.0
D008	Lead	7439-92-1	5.0
D013	Lindane	58-89-9	0.4
D009	Mercury	7439-97-6	0.2
D014	Methoxychlor	72-43-5	10.0
D035	Methyl ethyl ketone	78-93-3	200.0
D036	Nitrobenzene	98-95-3	2.0
D037	Pentachlorophenol	87-86-5	100.0
D038	Pyridine	110-86-1	5.0(3)
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0
D039	Tetrachloroethylene	127-18-4	0.7
D015	Toxaphene	8001-35-2	0.5
D040	Trichloroethylene	79-01-6	0.5
D04	2,4,5-Trichlorophenol	95-95-4	400.0
D042	2,4,6-Trichlorophenol	88-06-2	2.0
D017	2,4,5-TP (Silvex)	93-72-1	1.0
D043	Vinyl chloride	75-01-4	0.2

(1) Hazardous waste number.
 (2) Chemical abstracts service number.
 (3) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
 (4) If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/l.

Generic:	
F001	The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more, by volume, of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures (T)
F002	The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures (T)
F003	The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and, a total of ten percent or more, by volume, of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures (I)*
F004	The following spent non-halogenated solvents: Cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures (T)
F005	The following spent non-halogenated solvents: Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more, by volume, of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures (I,T)
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) Sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating, segregated basis, on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum (T)
F007	Spent cyanide plating bath solutions from electroplating operations (R,T)
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process (R,T)
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process (R,T)
F010	Quenching bath residues from oil baths from (R,T)

R315-261-30. Lists of Hazardous Wastes - General.

(a) A solid waste is a hazardous waste if it is listed in Sections R315-261-30 through 35, unless it has been excluded from this list under Sections R315-260.20 and 22.

(b) The Board shall indicate the basis for listing the classes or types of wastes listed in Sections R315-261-30 through 35 by employing one or more of the following Hazard Codes:

- (1) Ignitable Waste: (I)
- (2) Corrosive Waste: (C)
- (3) Reactive Waste: (R)
- (4) Toxicity Characteristic Waste: (E)
- (5) Acute Hazardous Waste: (H)
- (6) Toxic Waste: (T)

Appendix VII identifies the constituent which caused the Board to list the waste as a Toxicity Characteristic Waste or Toxic Waste in Sections R315-261-31 and 32.

(c) Each hazardous waste listed in Sections R315-261-30 through 35 is assigned an EPA Hazardous Waste Number which precedes the name of the waste. This number shall be used in complying with the notification requirements of Section 3010 of the RCRA and certain recordkeeping and reporting requirements under Rules R315-262 through 265, 268, and 270.

(d) The following hazardous wastes listed in Section R315-261-31 are subject to the exclusion limits for acutely hazardous wastes established in Section R315-261-5: EPA Hazardous Wastes Nos. F020, F021, F022, F023, F026 and F027.

R315-261-31. Lists of Hazardous Wastes - Hazardous Wastes from Non-Specific Sources.

(a) The following solid wastes are listed hazardous wastes from non-specific sources unless they are excluded under Sections R315-260-20 and 22 and listed in R315-260 appendix IX which incorporates 40 CFR 260 appendix IX by reference.

TABLE 2
Hazardous Wastes From Non-specific Sources

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
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F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process (R,T)
F010	Quenching bath residues from oil baths from (R,T)

	metal heat treating operations where cyanides are used in the process		F025	Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution	(T)
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations	(R,T)			
F012	Quenching waste water treatment sludges from metal heat treating operations where cyanides are used in the process	(T)			
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process. Wastewater treatment sludges from the manufacturing of motor vehicles using a zinc phosphating process will not be subject to this listing at the point of generation if the wastes are not placed outside on the land prior to shipment to a landfill for disposal and are either: disposed in a Subtitle D municipal or industrial landfill unit that is equipped with a single clay liner and is permitted, licensed or otherwise authorized by the state; or disposed in a landfill unit subject to, or otherwise meeting, the landfill requirements in Sections R315-258-40, R315-264-301 or 40 CFR 265.301, which is adopted by reference. For the purposes of this listing, motor vehicle manufacturing is defined in Subsection R315-261-31(b)(4)(i) and Subsection R315-261-31(ii) describes the recordkeeping requirements for motor vehicle manufacturing facilities	(T)	F026	Wastes, except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use, as a reactant, chemical intermediate, or component in a formulating process, of tetra-, penta-, or hexachlorobenzene under alkaline conditions	(H)
			F027	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. This listing does not include formulations containing Hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.	(H)
			F028	Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027	(T)
			F032	Wastewaters, except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations, except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with Section R315-261-35 or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes, i.e., F034 or F035, and where the generator does not resume or initiate use of chlorophenolic formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol	(T)
F020	Wastes, except wastewater and spent carbon from hydrogen chloride purification, from the production or manufacturing use, as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. This listing does not include wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol.	(H)			
F021	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use, as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives	(H)	F034	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol	(T)
F022	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use; as a reactant, chemical intermediate, or component in a formulating process; of tetra-, penta-, or hexachlorobenzenes under alkaline conditions	(H)			
F023	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use; as a reactant, chemical intermediate, or component in a formulating process; of tri- and tetrachlorophenols. This listing does not include wastes from equipment used only for the production or use of Hexachlorophene from highly purified 2,4,5-trichlorophenol.	(H)	F035	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol	(T)
F024	Process wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. This listing does not include wastewaters, wastewater treatment sludges, spent catalysts, and wastes listed in Sections R315-261.31 or 32.	(T)	F037	Petroleum refinery primary oil/water/solids separation sludge-Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludge generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters	(T)

- segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in Subsection R315-261-31(b)(2), including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units, and K051 wastes are not included in this listing. This listing does include residuals generated from processing or recycling oil-bearing hazardous secondary materials excluded under Subsection R315-261-(a)(12)(i), if those residuals are to be disposed of
- F038 Petroleum refinery secondary (emulsified) oil/water/solids separation sludge-Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in Subsection R315-261-31(b)(2), including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and F037, K048, and K051 wastes are not included in this listing (T)
- F039 Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under Sections R316-261-30 through 35. Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other Hazardous Wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/or F028. (T)
- F999 Residues from demilitarization, treatment, and testing of nerve, military, and chemical agents CX, GA, GB, GD, H, HD, HL, HN-1, HN-2, HN-3, HT, L, T, and VX. (R,T,C,H)

*(I,T) should be used to specify mixtures that are ignitable and contain toxic constituents.

(b) Listing Specific Definitions:

(1) For the purposes of the F037 and F038 listings, oil/water/solids is defined as oil and/or water and/or solids.

(2)(i) For the purposes of the F037 and F038 listings, aggressive biological treatment units are defined as units which employ one of the following four treatment methods: activated sludge; trickling filter; rotating biological contactor for the continuous accelerated biological oxidation of wastewaters; or high-rate aeration. High-rate aeration is a system of surface impoundments or tanks, in which intense mechanical aeration is used to completely mix the wastes, enhance biological activity, and

(A) the units employ a minimum of 6 hp per million gallons of treatment volume; and either

(B) the hydraulic retention time of the unit is no longer than 5 days; or

(C) the hydraulic retention time is no longer than 30 days and the unit does not generate a sludge that is a hazardous waste by the Toxicity Characteristic.

(ii) Generators and treatment, storage and disposal facilities have the burden of proving that their sludges are exempt from listing as F037 and F038 wastes under this definition. Generators and treatment, storage and disposal

facilities shall maintain, in their operating or other onsite records, documents and data sufficient to prove that:

(A) the unit is an aggressive biological treatment unit as defined in this subsection; and

(B) the sludges sought to be exempted from the definitions of F037 and/or F038 were actually generated in the aggressive biological treatment unit.

(3)(i) For the purposes of the F037 listing, sludges are considered to be generated at the moment of deposition in the unit, where deposition is defined as at least a temporary cessation of lateral particle movement.

(ii) For the purposes of the F038 listing,

(A) sludges are considered to be generated at the moment of deposition in the unit, where deposition is defined as at least a temporary cessation of lateral particle movement and

(B) floats are considered to be generated at the moment they are formed in the top of the unit.

(4) For the purposes of the F019 listing, the following apply to wastewater treatment sludges from the manufacturing of motor vehicles using a zinc phosphating process.

(i) Motor vehicle manufacturing is defined to include the manufacture of automobiles and light trucks/utility vehicles, including light duty vans, pick-up trucks, minivans, and sport utility vehicles. Facilities shall be engaged in manufacturing complete vehicles, body and chassis or unibody, or chassis only.

(ii) Generators shall maintain in their on-site records documentation and information sufficient to prove that the wastewater treatment sludges to be exempted from the F019 listing meet the conditions of the listing. These records shall include: the volume of waste generated and disposed of off site; documentation showing when the waste volumes were generated and sent off site; the name and address of the receiving facility; and documentation confirming receipt of the waste by the receiving facility. Generators shall maintain these documents on site for no less than three years. The retention period for the documentation is automatically extended during the course of any enforcement action or as requested by the Director.

R315-261-32. Lists of Hazardous Wastes - Hazardous Wastes from Specific Sources.

(a) The following solid wastes are listed hazardous wastes from specific sources unless they are excluded under Sections R315-260-20 and 22 and listed in appendix IX.

TABLE

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
Wood preservation: K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol	(T)
Inorganic pigments: K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments	(T)
K003	Wastewater treatment sludge from the production of molybdate orange pigments	(T)
K004	Wastewater treatment sludge from the production of zinc yellow pigments	(T)
K005	Wastewater treatment sludge from the production of chrome green pigments	(T)
K006	Wastewater treatment sludge from the production of chrome oxide green pigments, anhydrous and hydrated,	(T)
K007	Wastewater treatment sludge from the	(T)

	production of iron blue pigments		K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane	(T)
K008	Oven residue from the production of chrome oxide green pigments	(T)	K103	Process residues from aniline extraction from the production of aniline	(T)
Organic chemicals:			K104	Combined wastewater streams generated from nitrobenzene/aniline production	(T)
K009	Distillation bottoms from the production of acetaldehyde from ethylene	(T)	K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes	(T)
K010	Distillation side cuts from the production of acetaldehyde from ethylene	(T)	K107	Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides	(C,T)
K011	Bottom stream from the wastewater stripper in the production of acrylonitrile	(R,T)	K108	Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides	(I,T)
K013	Bottom stream from the acetonitrile column in the production of acrylonitrile	(R,T)	K109	Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides	(T)
K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile	(T)	K110	Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides	(T)
K015	Still bottoms from the distillation of benzyl chloride	(T)	K111	Product washwaters from the production of dinitrotoluene via nitration of toluene	(C,T)
K016	Heavy ends or distillation residues from the production of carbon tetrachloride	(T)	K112	Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene	(T)
K017	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin	(T)	K113	Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene	(T)
K018	Heavy ends from the fractionation column in ethyl chloride production	(T)	K114	Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene	(T)
K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production	(T)	K115	Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene	(T)
K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production	(T)	K116	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine	(T)
K021	Aqueous spent antimony catalyst waste from fluoromethanes production	(T)	K117	Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethane	(T)
K022	Distillation bottom tars from the production of phenol/acetone from cumene	(T)	K118	Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethane	(T)
K023	Distillation light ends from the production of phthalic anhydride from naphthalene	(T)	K136	Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethane	(T)
K024	Distillation bottoms from the production of phthalic anhydride from naphthalene	(T)	K149	Distillation bottoms from the production of alpha-, or methyl-, chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. This waste does not include still bottoms from the distillation of benzyl chloride.	(T)
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene	(T)	K150	Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha-, or methyl-, chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups	(T)
K026	Stripping still tails from the production of methy ethyl pyridines	(T)	K151	Wastewater treatment sludges, excluding	(T)
K027	Centrifuge and distillation residues from toluene diisocyanate production	(R,T)			
K028	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane	(T)			
K029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane	(T)			
K030	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene	(T)			
K083	Distillation bottoms from aniline production	(T)			
K085	Distillation or fractionation column bottoms from the production of chlorobenzenes	(T)			
K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene	(T)			
K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene	(T)			
K095	Distillation bottoms from the production of 1,1,1-trichloroethane	(T)			

	neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha-, or methyl-, chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups		landfill unit subject to either Section R315-264-301 or 40 CFR 265.301, which is adopted by reference, (iii) disposed in other landfill units that are Class I or V lined landfills regulated under Rules R315-301 through 320 or meet the design criteria in Sections R315-264-301, or 40 CFR 265.301, which is adopted by reference, or (iv) treated in a combustion unit that is permitted under Rules R315-260 through 270, or an onsite combustion unit that is permitted under the Clean Air Act. For the purposes of this listing, dyes and/or pigments production is defined in Subsection R315-261-32(b)(1). Section R315-261-32(d) describes the process for demonstrating that a facility's nonwastewaters are not K181. This listing does not apply to wastes that are otherwise identified as hazardous under Sections R315-261-21 through 24 and R315-261-31 through 33 at the point of generation. Also, the listing does not apply to wastes generated before any annual mass loading limit is met
K156	Organic waste, including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates, from the production of carbamates and carbamoyl oximes. This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate. (T)		
K157	Wastewaters, including scrubber waters, condenser waters, washwaters, and separation waters, from the production of carbamates and carbamoyl oximes. This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate. (T)		
K158	Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes. This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate. (T)		
K159	Organics from the treatment of thiocarbamate wastes (T)	Inorganic chemicals: K071	Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used (T)
K161	Purification solids; including filtration, evaporation, and centrifugation solids; bag house dust and floor sweepings from the production of dithiocarbamate acids and their salts. This listing does not include K125 or K126. (R,T)	K073	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production (T)
K174	Wastewater treatment sludges from the production of ethylene dichloride or vinyl chloride monomer, including sludges that result from commingled ethylene dichloride or vinyl chloride monomer wastewater and other wastewater, unless the sludges meet the following conditions: (i) they are disposed of in a subtitle C or non-hazardous landfill licensed or permitted by the state or federal government; (ii) they are not otherwise placed on the land prior to final disposal; and (iii) the generator maintains documentation demonstrating that the waste was either disposed of in an on-site landfill or consigned to a transporter or disposal facility that provided a written commitment to dispose of the waste in an off-site landfill. Respondents in any action brought to enforce the requirements of subtitle C shall, upon a showing by the government that the respondent managed wastewater treatment sludges from the production of vinyl chloride monomer or ethylene dichloride, demonstrate that they meet the terms of the exclusion set forth above. In doing so, they shall provide appropriate documentation, e.g., contracts between the generator and the landfill owner/operator, invoices documenting delivery of waste to landfill, etc., that the terms of the exclusion were met (T)	K106	Wastewater treatment sludge from the mercury cell process in chlorine production (T)
		K176	Baghouse filters from the production of antimony oxide, including filters from the production of intermediates, e.g., antimony metal or crude antimony oxide (E)
		K177	Slag from the production of antimony oxide that is speculatively accumulated or disposed, including slag from the production of intermediates, e.g., antimony metal or crude antimony oxide (T)
		K178	Residues from manufacturing and manufacturing-site storage of ferric chloride from acids formed during the production of titanium dioxide using the chloride-ilmenite process (T)
		Pesticides: K031	By-product salts generated in the production of MSMA and cacodylic acid (T)
		K032	Wastewater treatment sludge from the production of chlordane (T)
		K033	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane (T)
		K034	Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane (T)
K175	Wastewater treatment sludges from the production of vinyl chloride monomer using mercuric chloride catalyst in an acetylene-based process (T)	K035	Wastewater treatment sludges generated in the production of creosote (T)
K181	Nonwastewaters from the production of dyes and/or pigments, including nonwastewaters commingled at the point of generation with nonwastewaters from other processes, that, at the point of generation, contain mass loadings of any of the constituents identified in Subsection R315-261-32(c) that are equal to or greater than the corresponding Subsection R315-261-32(c) levels, as determined on a calendar year basis. These wastes will not be hazardous if the nonwastewaters are: (i) disposed in a Class I or V lined landfill, (ii) disposed in a hazardous waste (T)	K036	Still bottoms from toluene reclamation distillation in the production of disulfoton (T)
		K037	Wastewater treatment sludges from the production of disulfoton (T)
		K038	Wastewater from the washing and stripping of phorate production (T)
		K039	Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate (T)
		K040	Wastewater treatment sludge from the (T)

	production of phorate			guard beds used to desulfurize feeds to other catalytic reactors, this listing does not include inert support media	
K041	Wastewater treatment sludge from the production of toxaphene	(T)			
K042	Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T	(T)	K172	Spent Hydrotreating catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors, this listing does not include inert support media	(I,T)
K043	2,6-Dichlorophenol waste from the production of 2,4-D	(T)			
K097	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane	(T)	Iron and steel: K061	Emission control dust/sludge from the primary production of steel in electric furnaces	(T)
K098	Untreated process wastewater from the production of toxaphene	(T)	K062	Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry, SIC Codes 331 and 332	(C,T)
K099	Untreated wastewater from the production of 2,4-D	(T)			
K123	Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salt	(T)	Primary aluminum: K088	Spent potliners from primary aluminum reduction	(T)
K124	Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts	(C,T)	Secondary lead: K069	Emission control dust/sludge from secondary lead smelting. Note: This listing is stayed administratively for sludge generated from secondary acid scrubber systems. The stay will remain in effect until further administrative action is taken. If EPA takes further action effecting this stay, EPA will publish a notice of the action in the Federal Register	(T)
K125	Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts	(T)			
K126	Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts	(T)	K100	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting	(T)
K131	Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide	(C,T)			
K132	Spent absorbent and wastewater separator solids from the production of methyl bromide	(T)	Veterinary pharmaceuticals: K084	Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds	(T)
Explosives: K044	Wastewater treatment sludges from the manufacturing and processing of explosives	(R)	K101	Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds	(T)
K045	Spent carbon from the treatment of wastewater containing explosives	(R)			
K046	Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds	(T)	K102	Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds	(T)
K047	Pink/red water from TNT operations	(R)			
Petroleum refining: K048	Dissolved air flotation (DAF) float from the petroleum refining industry	(T)	Ink formulation: K086	Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead	(T)
K049	Slop oil emulsion solids from the petroleum refining industry	(T)			
K050	Heat exchanger bundle cleaning sludge from the petroleum refining industry	(T)	Coking: K060	Ammonia still lime sludge from coking operations	(T)
K051	API separator sludge from the petroleum refining industry	(T)	K087	Decanter tank tar sludge from coking operations	(T)
K052	Tank bottoms, leaded, from the petroleum refining industry	(T)	K141	Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke from coal or the recovery of coke by-products produced from coal. This listing does not include K087, decanter tank tar sludges from coking operations	(T)
K169	Crude oil storage tank sediment from petroleum refining operations	(T)			
K170	Clarified slurry oil tank sediment and/or in-line filter/separation solids from petroleum refining operations	(T)			
K171	Spent Hydrotreating catalyst from petroleum refining operations, including	(I,T)	K142	Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from	(T)

	coal	
K143	Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal	(T)
K144	Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal	(T)
K145	Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal	(T)
K147	Tar storage tank residues from coal tar refining	(T)
K148	Residues from coal tar distillation, including but not limited to, still bottoms	(T)

(b) Listing Specific Definitions:

(1) For the purposes of the K181 listing, dyes and/or pigments production is defined to include manufacture of the following product classes: dyes, pigments, or FDA certified colors that are classified as azo, triarylmethane, perylene or anthraquinone classes. Azo products include azo, monoazo, diazo, triazo, polyazo, azoic, benzidine, and pyrazolone products. Triarylmethane products include both triarylmethane and triphenylmethane products. Wastes that are not generated at a dyes and/or pigments manufacturing site, such as wastes from the offsite use, formulation, and packaging of dyes and/or pigments, are not included in the K181 listing.

(c) K181 Listing Levels. Nonwastewaters containing constituents in amounts equal to or exceeding the following levels during any calendar year are subject to the K181 listing, unless the conditions in the K181 listing are met.

TABLE

Constituent	Chemical abstracts No.	Mass levels (kg/yr)
Aniline	62-53-3	9,300
o-Anisidine	90-04-0	110
4-Chloroaniline	106-47-8	4,800
p-Cresidine	120-71-8	660
2,4-Dimethylaniline	95-68-1	100
1,2-Phenylenediamine	95-54-5	710
1,3-Phenylenediamine	108-45-2	1,200

(d) Procedures for demonstrating that dyes and/or pigment nonwastewaters are not K181. The procedures described in Subsections R315-261-32(d)(1) through(d)(3) and (d)(5) establish when nonwastewaters from the production of dyes/pigments would not be hazardous, these procedures apply to wastes that are not disposed in landfill units or treated in combustion units as specified in Subsection R315-261-32(a). If the nonwastewaters are disposed in landfill units or treated in combustion units as described in Subsection R315-261-32(a), then the nonwastewaters are not hazardous. In order to demonstrate that it is meeting the landfill disposal or combustion conditions contained in the K181 listing description, the generator shall maintain documentation as described in Subsection R315-261-32(d)(4).

(1) Determination based on no K181 constituents. Generators that have knowledge; e.g., knowledge of constituents in wastes based on prior sampling and analysis data and/or information about raw materials used, production processes used, and reaction and degradation products formed; that their wastes contain none of the K181 constituents, see Subsection R315-261-32(c), can use their knowledge to determine that their waste is not K181. The generator shall document the basis for all such determinations on an annual basis and keep each annual

documentation for three years.

(2) Determination for generated quantities of 1,000 MT/yr or less for wastes that contain K181 constituents. If the total annual quantity of dyes and/or pigment nonwastewaters generated is 1,000 metric tons or less, the generator can use knowledge of the wastes; e.g., knowledge of constituents in wastes based on prior analytical data and/or information about raw materials used, production processes used, and reaction and degradation products formed; to conclude that annual mass loadings for the K181 constituents are below the listing levels of Subsection R315-261-32(c). To make this determination, the generator shall:

(i) Each year document the basis for determining that the annual quantity of nonwastewaters expected to be generated will be less than 1,000 metric tons.

(ii) Track the actual quantity of nonwastewaters generated from January 1 through December 31 of each year. If, at any time within the year, the actual waste quantity exceeds 1,000 metric tons, the generator shall comply with the requirements of Subsection R315-261-32(d)(3) for the remainder of the year.

(iii) Keep a running total of the K181 constituent mass loadings over the course of the calendar year.

(iv) Keep the following records on site for the three most recent calendar years in which the hazardous waste determinations are made:

(A) The quantity of dyes and/or pigment nonwastewaters generated.

(B) The relevant process information used.

(C) The calculations performed to determine annual total mass loadings for each K181 constituent in the nonwastewaters during the year.

(3) Determination for generated quantities greater than 1,000 MT/yr for wastes that contain K181 constituents. If the total annual quantity of dyes and/or pigment nonwastewaters generated is greater than 1,000 metric tons, the generator shall perform all of the steps described in Subsections R315-261-32(d)(3)(i) through (d)(3)(xi) in order to make a determination that its waste is not K181.

(i) Determine which K181 constituents, see Subsection R315-261-32(c), are reasonably expected to be present in the wastes based on knowledge of the wastes; e.g., based on prior sampling and analysis data and/or information about raw materials used, production processes used, and reaction and degradation products formed.

(ii) If 1,2-phenylenediamine is present in the wastes, the generator can use either knowledge or sampling and analysis procedures to determine the level of this constituent in the wastes. For determinations based on use of knowledge, the generator shall comply with the procedures for using knowledge described in Subsection R315-261-32(d)(2) and keep the records described in Subsection R315-261-32(d)(2)(iv). For determinations based on sampling and analysis, the generator shall comply with the sampling and analysis and recordkeeping requirements described in Subsections R315-261-32(d)(3)(iii) through (xi).

(iii) Develop a waste sampling and analysis plan, or modify an existing plan, to collect and analyze representative waste samples for the K181 constituents reasonably expected to be present in the wastes. At a minimum, the plan shall include:

(A) A discussion of the number of samples needed to characterize the wastes fully;

(B) The planned sample collection method to obtain representative waste samples;

(C) A discussion of how the sampling plan accounts for potential temporal and spatial variability of the wastes.

(D) A detailed description of the test methods to be used, including sample preparation, clean up, if necessary, and determinative methods.

(iv) Collect and analyze samples in accordance with the

waste sampling and analysis plan.

(A) The sampling and analysis shall be unbiased, precise, and representative of the wastes.

(B) The analytical measurements shall be sufficiently sensitive, accurate and precise to support any claim that the constituent mass loadings are below the listing levels of Subsection R315-261-32(c).

(v) Record the analytical results.

(vi) Record the waste quantity represented by the sampling and analysis results.

(vii) Calculate constituent-specific mass loadings, product of concentrations and waste quantity.

(viii) Keep a running total of the K181 constituent mass loadings over the course of the calendar year.

(ix) Determine whether the mass of any of the K181 constituents listed in Subsection R315-261-32(c) generated between January 1 and December 31 of any year is below the K181 listing levels.

(x) Keep the following records on site for the three most recent calendar years in which the hazardous waste determinations are made:

(A) The sampling and analysis plan.

(B) The sampling and analysis results, including QA/QC data.

(C) The quantity of dyes and/or pigment nonwastewaters generated.

(D) The calculations performed to determine annual mass loadings.

(xi) Nonhazardous waste determinations shall be conducted annually to verify that the wastes remain nonhazardous.

(A) The annual testing requirements are suspended after three consecutive successful annual demonstrations that the wastes are nonhazardous. The generator can then use knowledge of the wastes to support subsequent annual determinations.

(B) The annual testing requirements are reinstated if the manufacturing or waste treatment processes generating the wastes are significantly altered, resulting in an increase of the potential for the wastes to exceed the listing levels.

(C) If the annual testing requirements are suspended, the generator shall keep records of the process knowledge information used to support a nonhazardous determination. If testing is reinstated, a description of the process change shall be retained.

(4) Recordkeeping for the landfill disposal and combustion exemptions. For the purposes of meeting the landfill disposal and combustion condition set out in the K181 listing description, the generator shall maintain on site for three years documentation demonstrating that each shipment of waste was received by a landfill unit that is subject to or meets the landfill design standards set out in the listing description, or was treated in combustion units as specified in the listing description.

(5) Waste holding and handling. During the interim period, from the point of generation to completion of the hazardous waste determination, the generator is responsible for storing the wastes appropriately. If the wastes are determined to be hazardous and the generator has not complied with the hazardous waste requirements during the interim period, the generator could be subject to an enforcement action for improper management.

R315-261-33. Lists of Hazardous Wastes - Discarded Commercial Chemical Products, Off-Specification Species, Container Residues, and Spill Residues Thereof.

The following materials or items are hazardous wastes if and when they are discarded or intended to be discarded as described in Subsection R315-261-2(a)(2)(i), when they are mixed with waste oil or used oil or other material and applied to the land for dust suppression or road treatment, when they are

otherwise applied to the land in lieu of their original intended use or when they are contained in products that are applied to the land in lieu of their original intended use, or when, in lieu of their original intended use, they are produced for use as, or a component of, a fuel, distributed for use as a fuel, or burned as a fuel.

(a) Any commercial chemical product, or manufacturing chemical intermediate having the generic name listed in Subsections R315-261-33(e) or (f).

(b) Any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in Subsection R315-261-33(e) or (f).

(c) Any residue remaining in a container or in an inner liner removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having the generic name listed in Subsection R315-261-33(e) or (f), unless the container is empty as defined in Subsection R315-261-7(b). Unless the residue is being beneficially used or reused, or legitimately recycled or reclaimed; or being accumulated, stored, transported or treated prior to such use, re-use, recycling or reclamation, the Director considers the residue to be intended for discard, and thus, a hazardous waste. An example of a legitimate re-use of the residue would be where the residue remains in the container and the container is used to hold the same commercial chemical product or manufacturing chemical intermediate it previously held. An example of the discard of the residue would be where the drum is sent to a drum reconditioner who reconditions the drum but discards the residue.

(d) Any residue or contaminated soil, water or other debris resulting from the cleanup of a spill into or on any land or water of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in Subsection R315-261-33(e) or (f), or any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any off-specification chemical product and manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in Subsection R315-261-33(e) or (f). The phrase "commercial chemical product or manufacturing chemical intermediate having the generic name listed in . . ." refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not refer to a material, such as a manufacturing process waste, that contains any of the substances listed in Subsection R315-261-33(e) or (f). Where a manufacturing process waste is deemed to be a hazardous waste because it contains a substance listed in Subsection R315-261-33(e) or (f), such waste shall be listed in either Sections R315-261-31 or 32 or shall be identified as a hazardous waste by the characteristics set forth in Sections R315-261-20 through 24.

(e) The commercial chemical products, manufacturing chemical intermediates or off-specification commercial chemical products or manufacturing chemical intermediates referred to in Subsections R315-261-33(a) through (d), are identified as acute hazardous wastes (H) and are subject to the small quantity exclusion defined in Subsection R315-261-5(e). For the convenience of the regulated community the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), and R (Reactivity). Absence of a letter indicates that the compound only is listed for acute toxicity. Wastes are first listed in alphabetical order by substance and then listed again in numerical order by Hazardous Waste Number. These wastes and their corresponding EPA Hazardous Waste Numbers are:

		TABLE			
Hazardous waste No.	Chemical abstracts No.	Substance			
P023	107-20-0	Acetaldehyde, chloro-	P016	542-88-1	Dichloromethyl ether
P002	591-08-2	Acetamide, N-(aminothioxomethyl)-	P036	696-28-6	Dichlorophenylarsine
P057	640-19-7	Acetamide, 2-fluoro-	P037	60-57-1	Dieldrin
P058	62-74-8	Acetic acid, fluoro-, sodium salt	P038	692-42-2	Diethylarsine
P002	591-08-2	1-Acetyl-2-thiourea	P041	311-45-5	Diethyl-p-nitrophenyl phosphate
P003	107-02-8	Acrolein	P040	297-97-2	0,0-Diethyl 0-pyrazinyl phosphorothioate
P070	116-06-3	Aldicarb	P043	55-91-4	Diisopropylfluorophosphate (DFP)
P203	1646-88-4	Aldicarb sulfone.	P004	309-00-2	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa- chloro-
P004	309-00-2	Aldrin			1,4,4a,5,8,8a-hexahydro-, (1alpha, 4alpha, 4beta, 5alpha,8alpha,8beta)-
P005	107-18-6	Allyl alcohol	P060	465-73-6	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa- chloro-
P006	20859-73-8	Aluminum phosphide (R,T)			1,4,4a,5,8,8a-hexahydro-, (1alpha, 4alpha, 4beta, 5beta, 8beta,8beta)-
P007	2763-96-4	5-(Aminomethyl)-3-isoxazolol	P037	60-57-1	2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-
P008	504-24-5	4-Aminopyridine			1a,2,2a,3,6,6a,7,7a-octahydro-, (1alpha, 2beta, 2alpha, 3beta, 6beta, 6alpha,7beta, 7alpha)-
P009	131-74-8	Ammonium picrate (R)	P051	(1)72-20-8	2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-
P119	7803-55-6	Ammonium vanadate			1a,2,2a,3,6,6a,7,7a-octahydro-, (1alpha, 2beta, 2alpha, 3beta, 6beta, 6alpha,7beta, 7alpha)-
P099	506-61-6	Argentate(1-), bis(cyano-C)-, potassium	P044	60-51-5	Dimethoate
P010	7778-39-4	Arsenic acid H3 AsO4	P046	122-09-8	alpha,alpha-Dimethylphenethylamine
P012	1327-53-3	Arsenic oxide As2 O3	P191	644-64-4	Dimetilan.
P011	1303-28-2	Arsenic oxide As2 O5	P047	(1)534-52-1	4,6-Dinitro-o-cresol, and salts
P011	1303-28-2	Arsenic pentoxide	P048	51-28-5	2,4-Dinitrophenol
P012	1327-53-3	Arsenic trioxide	P020	88-85-7	Dinoseb
P038	692-42-2	Arsine, diethyl-	P085	152-16-9	Diphosphoramidate, octamethyl-
P036	696-28-6	Arsonous dichloride, phenyl-	P111	107-49-3	Diphosphoric acid, tetraethyl ester
P054	151-56-4	Aziridine	P039	298-04-4	Disulfoton
P067	75-55-8	Aziridine, 2-methyl-	P049	541-53-7	Dithiobiuret
P013	542-62-1	Barium cyanide	P185	26419-73-8	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, 0- ((methylamino)-carbonyl)oxime.
P024	106-47-8	Benzenamine, 4-chloro-	P050	115-29-7	Endosulfan
P077	100-01-6	Benzenamine, 4-nitro-	P088	145-73-3	Endothall
P028	100-44-7	Benzene, (chloromethyl)-	P051	72-20-8	Endrin
P042	51-43-4	1,2-Benzenediol, 4-(1-hydroxy-2-(methylamino)ethyl)-, (R)-	P051	72-20-8	Endrin, and metabolites
P046	122-09-8	Benzenethanamine, alpha,alpha-dimethyl-	P042	51-43-4	Epinephrine
P014	108-98-5	Benzenethiol	P031	460-19-5	Ethanedinitrile
P127	1563-66-2	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-,methylcarbamate.	P194	23135-22-0	Ethanimidithioic acid, 2-(dimethylamino)-N-(((methylamino) carbonyl)oxy)-2-oxo-, methyl ester.
P188	57-64-7	Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo(2,3-b)indol-5-ylmethylcarbamate ester (1:1).	P066	16752-77-5	Ethanimidithioic acid, N-(((methylamino)carbonyl)oxy)-, methyl ester
P001	(1)81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, and salts, when present at concentrations greater than 0.3%	P101	107-12-0	Ethyl cyanide
P028	100-44-7	Benzyl chloride	P054	151-56-4	Ethyleneimine
P015	7440-41-7	Beryllium powder	P097	52-85-7	Famphur
P017	598-31-2	Bromoacetone	P056	7782-41-4	Fluorine
P018	357-57-3	Brucine	P057	640-19-7	Fluoroacetamide
P045	39196-18-4	2-Butanone, 3,3-dimethyl-1-(methylthio)-, 0-methylamino)carbonyl) oxime	P058	62-74-8	Fluoroacetic acid, sodium salt
P021	592-01-8	Calcium cyanide	P198	23422-53-9	Formetanate hydrochloride.
P021	592-01-8	Calcium cyanide Ca(CN)2	P197	17702-57-7	Formparanate.
P189	55285-14-8	Carbamic acid, ((dibutylamino)-thio)methyl-, 2,3-dihydro-2,2-dimethyl- 7-benzofuranyl ester.	P065	628-86-4	Fulminic acid, mercury(2+) salt (R,T)
P191	644-64-4	Carbamic acid, dimethyl-, 1-(((dimethyl-amino)carbonyl)-5-methyl-1H- pyrazol-3-yl ester.	P059	76-44-8	Heptachlor
P192	119-38-0	Carbamic acid, dimethyl-, 3-methyl-1- (1-methylethyl)-1H-pyrazol-5-yl ester.	P062	757-58-4	Hexaethyl tetraphosphate
P190	1129-41-5	Carbamic acid, methyl-, 3-methylphenyl ester.	P116	79-19-6	Hydrazinecarbothioamide
P127	1563-66-2	Carbofuran.	P068	60-34-4	Hydrazine, methyl-
P022	75-15-0	Carbon disulfide	P063	74-90-8	Hydrocyanic acid
P095	75-44-5	Carbonic dichloride	P063	74-90-8	Hydrogen cyanide
P189	55285-14-8	Carbosulfan.	P096	7803-51-2	Hydrogen phosphide
P023	107-20-0	Chloroacetaldehyde	P060	465-73-6	Isodrin
P024	106-47-8	p-Chloroaniline	P192	119-38-0	Isolan.
P026	5344-82-1	1-(o-Chlorophenyl)thiourea	P202	64-00-6	3-Isopropylphenyl N-methylcarbamate.
P027	542-76-7	3-Chloropropionitrile	P007	2763-96-4	3(2H)-Isoxazolone, 5-(aminomethyl)-
P029	544-92-3	Copper cyanide	P196	15339-36-3	Manganese, bis(dimethylcarbamodithioato-S,S')-,
P029	544-92-3	Copper cyanide Cu(CN)	P196	15339-36-3	Manganese dimethyldithiocarbamate.
P020	64-00-6	m-Cumenyl methylcarbamate.	P092	62-38-4	Mercury, (acetato-0)phenyl-
P030		Cyanides (soluble cyanide salts), not otherwise specified	P065	628-86-4	Mercury fulminate (R,T)
P031	460-19-5	Cyanogen	P082	62-75-9	Methanamine, N-methyl-N-nitroso-
P033	506-77-4	Cyanogen chloride	P064	624-83-9	Methane, isocyanato-
P033	506-77-4	Cyanogen chloride (CN)Cl	P016	542-88-1	Methane, oxybis(chloro-
P034	131-89-5	2-Cyclohexyl-4,6-dinitrophenol	P112	509-14-8	Methane, tetranitro- (R)
			P118	75-70-7	Methanethiol, trichloro-
			P198	23422-53-9	Methanimidamide, N,N-dimethyl-N'-(3-(((methylamino)-carbonyl)oxy)phenyl)-, monohydrochloride.
			P197	17702-57-7	Methanimidamide, N,N-dimethyl-N'-(2-methyl-

P050	115-29-7	4-(((methylamino)carbonyloxy)phenyl)-6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide	P027	542-76-7	Propanenitrile, 3-chloro-
P059	76-44-8	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro- 3a,4,7,7a-tetrahydro-	P069	75-86-5	Propanenitrile, 2-hydroxy-2-methyl-
P199	2032-65-7	Methiocarb.	P081	55-63-0	1,2,3-Propanetriol, trinitrate (R)
P066	16752-77-5	Methomyl	P017	598-31-2	2-Propanone, 1-bromo-
P068	60-34-4	Methyl hydrazine	P102	107-19-7	Propargyl alcohol
P064	624-83-9	Methyl isocyanate	P003	107-02-8	2-Propenal
P069	75-86-5	2-Methylacetonitrile	P005	107-18-6	2-Propen-1-ol
P071	298-00-0	Methyl parathion	P067	75-55-8	1,2-Propylenimine
P190	1129-41-5	Metolcarb.	P102	107-19-7	2-Propyn-1-ol
P128	315-8-4	Mexacarbate.	P008	504-24-5	4-Pyridinamine
P072	86-88-4	alpha-Naphthylthiourea	P075	(1)54-11-5	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, and salts
P073	13463-39-3	Nickel carbonyl	P204	57-47-6	Pyrrolo(2,3-b)indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)-.
P073	13463-39-3	Nickel carbonyl Ni(CO)4, (T-4)-	P114	12039-52-0	Selenious acid, dithallium(1+) salt
P074	557-19-7	Nickel cyanide	P103	630-10-4	Selenourea
P074	557-19-7	Nickel cyanide Ni(CN)2	P104	506-64-9	Silver cyanide
P075	(1)54-11-5	Nicotine, and salts	P104	506-64-9	Silver cyanide Ag(CN)
P076	10102-43-9	Nitric oxide	P105	26628-22-8	Sodium azide
P077	100-01-6	p-Nitroaniline	P106	143-33-9	Sodium cyanide
P078	10102-44-0	Nitrogen dioxide	P106	143-33-9	Sodium cyanide Na(CN)
P076	10102-43-9	Nitrogen oxide NO	P108	(1)57-24-9	Strychnidin-10-one, and salts
P078	10102-44-0	Nitrogen oxide NO2	P018	357-57-3	Strychnidin-10-one, 2,3-dimethoxy-
P081	55-63-0	Nitroglycerine (R)	P108	(1)57-24-9	Strychnine, and salts
P082	62-75-9	N-Nitrosodimethylamine	P115	7446-18-6	Sulfuric acid, dithallium(1+) salt
P084	4549-40-0	N-Nitrosomethylvinylamine	P109	3689-24-5	Tetraethylthiopyrophosphate
P085	152-16-9	Octamethylpyrophosphoramidate	P110	78-00-2	Tetraethyl lead
P087	20816-12-0	Osmium oxide OsO4, (T-4)-	P111	107-49-3	Tetraethyl pyrophosphate
P087	20816-12-0	Osmium tetroxide	P112	509-14-8	Tetranitromethane (R)
P088	145-73-3	7-Oxabicyclo(2.2.1)heptane-2,3-dicarboxylic acid	P062	757-58-4	Tetraphosphoric acid, hexaethyl ester
P194	23135-22-0	Oxamyl.	P113	1314-32-5	Thallic oxide
P089	56-38-2	Parathion	P113	1314-32-5	Thallium oxide Tl2 O3
P034	131-89-5	Phenol, 2-cyclohexyl-4,6-dinitro-	P114	12039-52-0	Thallium(I) selenite
P048	51-28-5	Phenol, 2,4-dinitro-	P115	7446-18-6	Thallium(I) sulfate
P047	(1)534-52-1	Phenol, 2-methyl-4,6-dinitro-, and salts	P109	3689-24-5	Thiodiphosphoric acid, tetraethyl ester
P020	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro-	P045	39196-18-4	Thiofanox
P009	131-74-8	Phenol, 2,4,6-trinitro-, ammonium salt (R)	P049	541-53-7	Thioimidodicarbonic diamide ((H2 N)C(S))2 NH
P128	315-18-4	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester).	P014	108-98-5	Thiophenol
P199	2032-65-7	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate	P116	79-19-6	Thiosemicarbazide
P202	64-00-6	Phenol, 3-(1-methylethyl)-, methyl carbamate.	P026	5344-82-1	Thiourea, (2-chlorophenyl)-
P201	2631-37-0	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate.	P072	86-88-4	Thiourea, 1-naphthalenyl-
P092	62-38-4	Phenylmercury acetate	P093	103-85-5	Thiourea, phenyl-
P093	103-85-5	Phenylthiourea	P185	26419-73-8	Tirpate.
P094	298-02-2	Phorate	P123	8001-35-2	Toxaphene
P095	75-44-5	Phosgene	P118	75-70-7	Trichloromethanethiol
P096	7803-51-2	Phosphine	P119	7803-55-6	Vanadic acid, ammonium salt
P041	311-45-5	Phosphoric acid, diethyl 4-nitrophenyl ester	P120	1314-62-1	Vanadium oxide V2 O5
P039	298-04-4	Phosphorodithioic acid, 0,0-diethyl S-(2-(ethylthio)ethyl) ester	P120	1314-62-1	Vanadium pentoxide
P094	298-02-2	Phosphorodithioic acid, 0,0-diethyl S-((ethylthio)methyl) ester	P084	4549-40-0	Vinylamine, N-methyl-N-nitroso-
P044	60-51-5	Phosphorodithioic acid, 0,0-dimethyl S-(2-(methylamino)-2-oxoethyl) ester	P001	(1)81-81-2	Warfarin, and salts, when present at concentrations greater than 0.3%
P043	55-91-4	Phosphorofluoric acid, bis(1-methylethyl) ester	P205	137-30-4	Zinc, bis(dimethylcarbamodithioato-S,S')-,
P089	56-38-2	Phosphorothioic acid, 0,0-diethyl 0-(4-nitrophenyl) ester	P121	557-21-1	Zinc cyanide
P040	297-97-2	Phosphorothioic acid, 0,0-diethyl 0-pyrazinyl ester	P121	557-21-1	Zinc cyanide Zn(CN)2
P097	52-85-7	Phosphorothioic acid, 0-(4-((dimethylamino)sulfonyl)phenyl) 0,0-dimethyl ester	P122	1314-84-7	Zinc phosphide Zn3 P2, when present at concentrations greater than 10% (R,T)
P071	298-00-0	Phosphorothioic acid, 0,0-dimethyl 0-(4-nitrophenyl) ester	P205	137-30-4	Ziram.
P204	57-47-6	Physostigmine.	P001	(1)81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, and salts, when present at concentrations greater than 0.3%
P188	57-64-7	Physostigmine salicylate.	P001	(1)81-81-2	Warfarin, and salts, when present at concentrations greater than 0.3%
P110	78-00-2	Plumbane, tetraethyl-	P002	591-08-2	Acetamide, -(aminothioxomethyl)-
P098	151-50-8	Potassium cyanide	P002	591-08-2	1-Acetyl-2-thiourea
P098	151-50-8	Potassium cyanide K(CN)	P003	107-02-8	Acrolein
P099	506-61-6	Potassium silver cyanide	P003	107-02-8	2-Propenal
P201	2631-37-0	Promecarb	P004	309-00-2	Aldrin
P070	116-06-3	Propanal, 2-methyl-2-(methylthio)-, 0-((methylamino)carbonyl)oxime	P004	309-00-2	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a,- hexahydro-, (1alpha, 4alpha, 4beta, 5alpha, 8alpha,8beta)-
P203	1646-88-4	Propanal, 2-methyl-2-(methyl-sulfonyl)-, 0-((methylamino)carbonyl) oxime.	P005	107-18-6	Allyl alcohol
P101	107-12-0	Propanenitrile	P005	107-18-6	2-Propen-1-ol
			P006	20859-73-8	Aluminum phosphide (R,T)
			P007	2763-96-4	5-(Aminomethyl)-3-isoxazolol
			P007	2763-96-4	3(2H)-Isoxazolone, 5-(aminomethyl)-
			P008	504-24-5	4-Aminopyridine
			P008	504-24-5	4-Pyridinamine
			P009	131-74-8	Ammonium picrate (R)
			P009	131-74-8	Phenol, 2,4,6-trinitro-, ammonium salt (R)
			P010	7778-39-4	Arsenic acid H3 AsO4

P011	1303-28-2	Arsenic oxide As2 O5					b)oxirene, 3,4,5,6,9,9-hexachloro-
P011	1303-28-2	Arsenic pentoxide					1a,2,2a,3,6,6a,7,7a-octahydro-,
P012	1327-53-3	Arsenic oxide As2 O3					(1alpha, 2beta,2abeta, 3alpha,
P012	1327-53-3	Arsenic trioxide					6alpha, 6abeta,7beta, 7aalpha)-, and
P013	542-62-1	Barium cyanide					metabolites
P014	108-98-5	Benzenethiol	P051	72-20-8	Endrin		
P014	108-98-5	Thiophenol	P051	72-20-8	Endrin, and metabolites		
P015	7440-41-7	Beryllium powder	P054	151-56-4	Aziridine		
P016	542-88-1	Dichloromethyl ether	P054	151-56-4	Ethyleneimine		
P016	542-88-1	Methane, oxybis(chloro-	P056	7782-41-4	Fluorine		
P017	598-31-2	Bromoacetone	P057	640-19-7	Acetamide, 2-fluoro-		
P017	598-31-2	2-Propanone, 1-bromo-	P057	640-19-7	Fluoroacetamide		
P018	357-57-3	Brucine	P058	62-74-8	Acetic acid, fluoro-, sodium salt		
P018	357-57-3	Strychnidin-10-one, 2,3-dimethoxy-	P058	62-74-8	Fluoroacetic acid, sodium salt		
P020	88-85-7	Dinoseb	P059	76-44-8	Heptachlor		
P020	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro-	P059	76-44-8	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-		
P021	592-01-8	Calcium cyanide	P060	465-73-6	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa-chloro-		
P021	592-01-8	Calcium cyanide Ca(CN)2			1,4,4a,5,8,8a-hexahydro-, (1alpha, 4alpha,4abeta,5beta, 8beta,8abeta)-		
P022	75-15-0	Carbon disulfide	P060	465-73-6	Isodrin		
P023	107-20-0	Acetaldehyde, chloro-	P062	757-58-4	Hexaethyl tetraphosphate		
P023	107-20-0	Chloroacetaldehyde	P062	757-58-4	Tetraphosphoric acid, hexaethyl ester		
P024	106-47-8	Benzenamine, 4-chloro-	P063	74-90-8	Hydrocyanic acid		
P024	106-47-8	p-Chloroaniline	P063	74-90-8	Hydrogen cyanide		
P026	5344-82-1	1-(o-Chlorophenyl)thiourea	P064	624-83-9	Methane, isocyanato-		
P026	5344-82-1	Thiourea, (2-chlorophenyl)-	P064	624-83-9	Methyl isocyanate		
P027	542-76-7	3-Chloropropionitrile	P065	628-86-4	Fulminic acid, mercury(2+) salt (R,T)		
P027	542-76-7	Propanenitrile, 3-chloro-	P065	628-86-4	Mercury fulminate (R,T)		
P028	100-44-7	Benzene, (chloromethyl)-	P066	16752-77-5	Ethanimidothioic acid, N-((methylamino)carbonyl)oxy-, methyl ester		
P028	100-44-7	Benzyl chloride					
P029	544-92-3	Copper cyanide	P066	16752-77-5	Methomyl		
P029	544-92-3	Copper cyanide Cu(CN)					
P030		Cyanides (soluble cyanide salts), not otherwise specified	P066	16752-77-5	Methomyl		
P031	460-19-5	Cyanogen	P067	75-55-8	Aziridine, 2-methyl-		
P031	460-19-5	Ethanedinitrile	P067	75-55-8	1,2-Propylenimine		
P033	506-77-4	Cyanogen chloride	P068	60-34-4	Hydrazine, methyl-		
P033	506-77-4	Cyanogen chloride (CN)Cl	P068	60-34-4	Methyl hydrazine		
P034	131-89-5	2-Cyclohexyl-4,6-dinitrophenol	P069	75-86-5	2-Methylactonitrile		
P034	131-89-5	Phenol, 2-cyclohexyl-4,6-dinitro-	P069	75-86-5	Propanenitrile, 2-hydroxy-2-methyl-		
P036	696-28-6	Arsonous dichloride, phenyl-	P070	116-06-3	Aldicarb		
P036	696-28-6	Dichlorophenylarsine	P070	116-06-3	Propanal, 2-methyl-2-(methylthio)-, 0-((methylamino)carbonyl)oxime		
P037	60-57-1	Dieldrin	P071	298-00-0	Methyl parathion		
P037	60-57-1	2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha, 2beta, 2abeta, 3alpha, 6beta, 6aalpha, 7beta, 7aalpha)-	P071	298-00-0	Phosphorothioic acid, 0,0,-dimethyl 0-(4-nitrophenyl) ester		
P038	692-42-2	Arsine, diethyl-	P072	86-88-4	alpha-Naphthylthiourea		
P038	692-42-2	Diethylarsine	P072	86-88-4	Thiourea, 1-naphthalenyl-		
P039	298-04-4	Disulfoton	P073	13463-39-3	Nickel carbonyl		
P039	298-04-4	Phosphorodithioic acid, 0,0-diethyl S-(2-(ethylthio)ethyl) ester	P073	13463-39-3	Nickel carbonyl Ni(CO)4, (T-4)-		
P040	297-97-2	0,0-Diethyl 0-pyrazinyl phosphorothioate	P074	557-19-7	Nickel cyanide		
P040	297-97-2	Phosphorothioic acid, 0,0-diethyl 0-pyrazinyl ester	P074	557-19-7	Nickel cyanide Ni(CN)2		
P041	311-45-5	Diethyl-p-nitrophenyl phosphate	P075	(1)54-11-5	Nicotine, and salts		
P041	311-45-5	Phosphoric acid, diethyl 4-nitrophenyl ester	P075	(1)54-11-5	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, S-, and salts		
P042	51-43-4	1,2-Benzenediol, 4-(1-hydroxy-2-(methylamino)ethyl)-, (R)-	P076	10102-43-9	Nitric oxide		
P042	51-43-4	Epinephrine	P076	10102-43-9	Nitrogen oxide N0		
P043	55-91-4	Diisopropylfluorophosphate (DFP)	P077	100-01-6	Benzenamine, 4-nitro-		
P043	55-91-4	Phosphorofluoric acid, bis(1-methylethyl) ester	P077	100-01-6	p-Nitroaniline		
P044	60-51-5	Dimethoate	P078	10102-44-0	Nitrogen dioxide		
P044	60-51-5	Phosphorodithioic acid, 0,0-dimethyl S-(2-(methyl amino)-2-oxoethyl) ester	P078	10102-44-0	Nitrogen oxide N02		
P045	39196-18-4	2-Butanone, 3,3-dimethyl-1-(methylthio)-, 0-((methylamino)carbonyl) oxime	P081	55-63-0	Nitroglycerine (R)		
P045	39196-18-4	Thiofanox	P081	55-63-0	1,2,3-Propanetriol, trinitrate (R)		
P046	122-09-8	Benzeneethanamine, alpha,alpha-dimethyl-	P082	62-75-9	Methanamine, -methyl-N-nitroso-		
P046	122-09-8	alpha,alpha-Dimethylphenethylamine	P082	62-75-9	N-Nitrosodimethylamine		
P047	(1)534-52-1	4,6-Dinitro-o-cresol, and salts	P084	4549-40-0	N-Nitrosomethylvinylamine		
P047	(1)534-52-1	Phenol, 2-methyl-4,6-dinitro-, and salts	P084	4549-40-0	Vinylamine, -methyl-N-nitroso-		
P048	51-28-5	2,4-Dinitrophenol	P085	152-16-9	Diphosphoramidate, octamethyl-		
P048	51-28-5	Phenol, 2,4-dinitro-	P085	152-16-9	Octamethylpyrophosphoramidate		
P049	541-53-7	Dithiobiuret	P087	20816-12-0	Osmium oxide OsO4, (T-4)-		
P049	541-53-7	Thioimidodicarbonic diamide ((H2 N(C(S)))2 NH	P087	20816-12-0	Osmium tetroxide		
P050	115-29-7	Endosulfan	P088	145-73-3	Endothall		
P050	115-29-7	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide	P088	145-73-3	7-Oxabicyclo(2.2.1)heptane-2,3-dicarboxylic acid		
P051	(1)72-20-8	2,7:3,6-Dimethanonaphth (2,3-	P089	56-38-2	Parathion		
			P089	56-38-2	Phosphorothioic acid, 0,0-diethyl 0-(4-nitrophenyl) ester		
			P092	62-38-4	Mercury, (acetato-0)phenyl-		
			P092	62-38-4	Phenylmercury acetate		
			P093	103-85-5	Phenylthiourea		
			P093	103-85-5	Thiourea, phenyl-		
			P094	298-02-2	Phorate		
			P094	298-02-2	Phosphorodithioic acid, 0,0-diethyl S-((ethylthio)methyl) ester		
			P095	75-44-5	Carbonic dichloride		
			P095	75-44-5	Phosgene		
			P096	7803-51-2	Hydrogen phosphide		
			P096	7803-51-2	Phosphine		
			P097	52-85-7	Famphur		

P097	52-85-7	Phosphorothioic acid, 0-(4-((dimethylamino)sulfonyl)phenyl) 0,0-dimethyl ester
P098	151-50-8	Potassium cyanide
P098	151-50-8	Potassium cyanide K(CN)
P099	506-61-6	Argentate(1-), bis(cyano-C)-, potassium
P099	506-61-6	Potassium silver cyanide
P101	107-12-0	Ethyl cyanide
P101	107-12-0	Propanenitrile
P102	107-19-7	Propargyl alcohol
P102	107-19-7	2-Propyn-1-ol
P103	630-10-4	Selenourea
P104	506-64-9	Silver cyanide
P104	506-64-9	Silver cyanide Ag(CN)
P105	26628-22-8	Sodium azide
P106	143-33-9	Sodium cyanide
P106	143-33-9	Sodium cyanide Na(CN)
P108	(1)157-24-9	Strychnidin-10-one, and salts
P108	(1)157-24-9	Strychnine, and salts
P109	3689-24-5	Tetraethylthiopyrophosphate
P109	3689-24-5	Thiodiphosphoric acid, tetraethyl ester
P110	78-00-2	Plumbane, tetraethyl-
P110	78-00-2	Tetraethyl lead
P111	107-49-3	Diphosphoric acid, tetraethyl ester
P111	107-49-3	Tetraethyl pyrophosphate
P112	509-14-8	Methane, tetranitro-(R)
P112	509-14-8	Tetranitromethane (R)
P113	1314-32-5	Thallic oxide
P113	1314-32-5	Thallium oxide Tl2 O3
P114	12039-52-0	Selenious acid, dithallium(1+) salt
P114	12039-52-0	Tetraethylthiopyrophosphate
P115	7446-18-6	Thiodiphosphoric acid, tetraethyl ester
P115	7446-18-6	Plumbane, tetraethyl-
P116	79-19-6	Tetraethyl lead
P116	79-19-6	Thiosemicarbazide
P118	75-70-7	Methanethiol, trichloro-
P118	75-70-7	Trichloromethanethiol
P119	7803-55-6	Ammonium vanadate
P119	7803-55-6	Vanadic acid, ammonium salt
P120	1314-62-1	Vanadium oxide V2O5
P120	1314-62-1	Vanadium pentoxide
P121	557-21-1	Zinc cyanide
P121	557-21-1	Zinc cyanide Zn(CN)2
P122	1314-84-7	Zinc phosphide Zn3 P2, when present at concentrations greater than 10% (R,T)
P123	8001-35-2	Toxaphene
P127	1563-66-2	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate.
P127	1563-66-2	Carbofuran
P128	315-8-4	Mexacarbate
P128	315-18-4	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester)
P185	26419-73-8	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, 0-((methylamino)-carbonyl)oxime.
P185	26419-73-8	Tirpate
P188	57-64-7	Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo(2,3-b)indol-5-yl methylcarbamate ester (1:1)
P188	57-64-7	Physostigmine salicylate
P189	55285-14-8	Carbamic acid, ((dibutylamino)-thio)methyl-, 2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester
P189	55285-14-8	Carbosulfan
P190	1129-41-5	Carbamic acid, methyl-, 3-methylphenyl ester
P190	1129-41-5	Metolcarb
P191	644-64-4	Carbamic acid, dimethyl-, 1-((dimethyl-amino)carbonyl)-5-methyl-1H-pyrazol-3-yl ester
P191	644-64-4	Dimetilán
P192	119-38-0	Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester
P192	119-38-0	Isolan
P194	23135-22-0	Ethanimidthioic acid, 2-(dimethylamino)-N-((methylamino)carbonyl)oxy)-2-oxo-, methyl ester
P194	23135-22-0	Oxamy1
P196	15339-36-3	Manganese, bis(dimethylcarbamodithioato-S,S')-,
P196	15339-36-3	Manganese dimethylthiocarbamate
P197	17702-57-7	Formparanate
P197	17702-57-7	Methanimidamide, N,N-dimethyl-N'-(2-

P198	23422-53-9	methyl-4-((methylamino)carbonyl)oxy)phenyl)-Formetate hydrochloride
P198	23422-53-9	Methanimidamide, N,N-dimethyl-N'-(3-((methylamino)-carbonyl)oxy)phenyl)-monohydrochloride
P199	2032-65-7	Methiocarb
P199	2032-65-7	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate
P201	2631-37-0	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate
P201	2631-37-0	Promecarb
P202	64-00-6	m-Cumenyl methylcarbamate
P202	64-00-6	3-Isopropylphenyl N-methylcarbamate
P202	64-00-6	Phenol, 3-(1-methylethyl)-, methyl carbamate
P203	1646-88-4	Aldicarb sulfone
P203	1646-88-4	Propanal, 2-methyl-2-(methylsulfonyl)-, 0-((methylamino)carbonyl)oxime
P204	57-47-6	Physostigmine
P204	57-47-6	Pyrrolo(2,3-b)indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)-
P205	137-30-4	Zinc, bis(dimethylcarbamodithioato-S,S')-,
P205	137-30-4	Ziram
P999		Nerve, Military, and Chemical Agents (i.e., CX, GA, GB, GD, H, HD, HL, HN-1, HN-2, HN-3, HT, L, T, and VX.)

Note (1) CAS Number given for parent compound only.

(f) The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products referred to in Subsections R315-261-33(a) through (d), are identified as toxic wastes (T), unless otherwise designated and are subject to the small quantity generator exclusion defined in Subsection R315-261-5(a) and (g). For the convenience of the regulated community, the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), R (Reactivity), I (Ignitability) and C (Corrosivity). Absence of a letter indicates that the compound is only listed for toxicity. Wastes are first listed in alphabetical order by substance and then listed again in numerical order by Hazardous Waste Number. These wastes and their corresponding EPA Hazardous Waste Numbers are:

TABLE

Hazardous waste No.	Chemical abstracts No.	Substance
U394	30558-43-1	A2213.
U001	75-07-0	Acetaldehyde (I)
U034	75-87-6	Acetaldehyde, trichloro-
U187	62-44-2	Acetamide, N-(4-ethoxyphenyl)-
U005	53-96-3	Acetamide, N-9H-fluoren-2-yl-
U240	(1)94-75-7	Acetic acid, (2,4-dichlorophenoxy)-, salts and esters
U112	141-78-6	Acetic acid ethyl ester (I)
U144	301-04-2	Acetic acid, lead(2+) salt
U214	563-68-8	Acetic acid, thallium(1+) salt
see F027	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-
U002	67-64-1	Acetone (I)
U003	75-05-8	Acetonitrile (I,T)
U004	98-86-2	Acetophenone
U005	53-96-3	2-Acetylaminofluorene
U006	75-36-5	Acetyl chloride (C,R,T)
U007	79-06-1	Acrylamide
U008	79-10-7	Acrylic acid (I)
U009	107-13-1	Acrylonitrile
U011	61-82-5	Amitrole
U012	62-53-3	Aniline (I,T)
U136	75-60-5	Arsinic acid, dimethyl-
U014	492-80-8	Auramine
U015	115-02-6	Azaserine
U010	50-07-7	Azirino(2',3':3,4)pyrrolo(1,2-a)indole-4,7-dione, 6-amino-8-((aminocarbonyl)oxy) methyl)-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, (1aS-(1aalpha,8beta,8aalpha,8balpha))-

U280	101-27-9	Barban.	U085	1464-53-5	2,2'-Bioxirane
U278	22781-23-3	Bendiocarb.	U021	92-87-5	(1,1'-Biphenyl)-4,4'-diamine
U364	22961-82-6	Bendiocarb phenol.	U073	91-94-1	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dichloro-
U271	17804-35-2	Benomyl.	U091	119-90-4	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethoxy-
U157	56-49-5	Benz(j)aceanthrylene, 1,2-dihydro-3-methyl-	U095	119-93-7	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethyl-
U016	225-51-4	Benz(c)acridine	U225	75-25-2	Bromoform
U017	98-87-3	Benzal chloride	U030	101-55-3	4-Bromophenyl phenyl ether
U192	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	U128	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
U018	56-55-3	Benz(a)anthracene	U172	924-16-3	1-Butanamine, N-butyl-N-nitroso-
U094	57-97-6	Benz(a)anthracene, 7,12-dimethyl-	U031	71-36-3	1-Butanol (I)
U012	62-53-3	Benzenamine (I,T)	U159	78-93-3	2-Butanone (I,T)
U014	492-80-8	Benzenamine, 4,4'-	U160	1338-23-4	2-Butanone, peroxide (R,T)
U049	3165-93-3	carbonimidoylbis(N,N-dimethyl-4-chloro-2-methyl-, hydrochloride	U053	4170-30-3	2-Butenal
U093	60-11-7	Benzenamine, N,N-dimethyl-4-(phenylazo)-	U074	764-41-0	2-Butene, 1,4-dichloro- (I,T)
U328	95-53-4	Benzenamine, 2-methyl-	U143	303-34-4	2-Butenoic acid, 2-methyl-, 7-((2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy)methyl)- 2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, (1S-(1alpha(Z),7(2S*,3R*),7aalpha))-n-Butyl alcohol (I)
U353	106-49-0	Benzenamine, 4-methyl-	U031	71-36-3	n-Butyl alcohol (I)
U158	101-14-4	Benzenamine, 4,4'-methylenebis(2-chloro-	U136	75-60-5	Cacodylic acid
U222	636-21-5	Benzenamine, 2-methyl-, hydrochloride	U032	13765-19-0	Calcium chromate
U181	99-55-8	Benzenamine, 2-methyl-5-nitro-	U372	10605-21-7	Carbamic acid, 1H-benzimidazol-2-yl, methyl ester.
U019	71-43-2	Benzene (I,T)	U271	17804-35-2	Carbamic acid, (1-(butylamino)carbonyl)-1H-benzimidazol-2-yl)-, methyl ester.
U038	510-15-6	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester	U280	101-27-9	Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester.
U030	101-55-3	Benzene, 1-bromo-4-phenoxy-	U238	51-79-6	Carbamic acid, ethyl ester
U035	305-03-3	Benzenebutanoic acid, 4-(bis(2-chloroethyl)amino)-	U178	615-53-2	Carbamic acid, methyl nitroso-, ethyl ester
U037	108-90-7	Benzene, chloro-	U373	122-42-9	Carbamic acid, phenyl-, 1-methylethyl ester.
U221	25376-45-8	Benzenediamine, ar-methyl-	U409	23564-05-8	Carbamic acid, (1,2-phenylenebis(iminocarbonothioyl))bis-, dimethyl ester.
U028	117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	U097	79-44-7	Carbamic chloride, dimethyl-
U069	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester	U389	2303-17-5	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester.
U088	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester	U387	52888-80-9	Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester.
U102	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester	U114	(1)111-54-6	Carbamodithioic acid, 1,2-ethanediyldis-, salts and esters
U107	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester	U062	2303-16-4	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester
U070	95-50-1	Benzene, 1,2-dichloro-	U279	63-25-2	Carbaryl.
U071	541-73-1	Benzene, 1,3-dichloro-	U372	10605-21-7	Carbendazim.
U072	106-46-7	Benzene, 1,4-dichloro-	U367	1563-38-8	Carbofuran phenol.
U060	72-54-8	Benzene, 1,1'-(2,2-dichloroethylidene) bis(4-chloro-	U215	6533-73-9	Carbonic acid, dithallium(1+) salt
U017	98-87-3	Benzene, (dichloromethyl)-	U033	353-50-4	Carbonic difluoride
U223	26471-62-5	Benzene, 1,3-diisocyanatomethyl- (R,T)	U156	79-22-1	Carbonochloridic acid, methyl ester (I,T)
U239	1330-20-7	Benzene, dimethyl- (I)	U033	353-50-4	Carbon oxyfluoride (R,T)
U201	108-46-3	1,3-Benzenediol	U211	56-23-5	Carbon tetrachloride
U127	118-74-1	Benzene, hexachloro-	U034	75-87-6	Chloral
U056	110-82-7	Benzene, hexahydro- (I)	U035	305-03-3	Chlorambucil
U220	108-88-3	Benzene, methyl-	U036	57-74-9	Chlordane, alpha and gamma isomers
U105	121-14-2	Benzene, 1-methyl-2,4-dinitro-	U026	494-03-1	Chlornaphazin
U106	606-20-2	Benzene, 2-methyl-1,3-dinitro-	U037	108-90-7	Chlorobenzene
U055	98-82-8	Benzene, (1-methylethyl)- (I)	U038	510-15-6	Chlorobenzilate
U169	98-95-3	Benzene, nitro-	U039	59-50-7	p-Chloro-m-cresol
U183	608-93-5	Benzene, pentachloro-	U042	110-75-8	2-Chloroethyl vinyl ether
U185	82-68-8	Benzene, pentachloronitro-	U044	67-66-3	Chloroform
U020	98-09-9	Benzenesulfonic acid chloride (C,R)	U046	107-30-2	Chloromethyl methyl ether
U020	98-09-9	Benzenesulfonyl chloride (C,R)	U047	91-58-7	beta-Chloronaphthalene
U207	95-94-3	Benzene, 1,2,4,5-tetrachloro-	U048	95-57-8	o-Chlorophenol
U061	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene) bis(4-chloro-	U049	3165-93-3	4-Chloro-o-toluidine, hydrochloride
U247	72-43-5	Benzene, 1,1'-(2,2,2-trichloroethylidene) bis(4-methoxy-	U032	13765-19-0	Chromic acid H2 CrO4, calcium salt
U023	98-07-7	Benzene, (trichloromethyl)-	U050	218-01-9	Chrysene
U234	99-35-4	Benzene, 1,3,5-trinitro-	U051		Creosote
U021	92-87-5	Benzidine	U052	1319-77-3	Cresol (Cresylic acid)
U278	22781-23-3	1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate.	U053	4170-30-3	Crotonaldehyde
U364	22961-82-6	1,3-Benzodioxol-4-ol, 2,2-dimethyl-, 1,3-Benzodioxole, 5-(2-propenyl)-	U055	98-82-8	Cumene (I)
U203	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-	U246	506-68-3	Cyanogen bromide (CN)Br
U141	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-	U197	106-51-4	2,5-Cyclohexadiene-1,4-dione
U367	1563-38-8	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-	U056	110-82-7	Cyclohexane (I)
U090	94-58-6	1,3-Benzodioxole, 5-propyl-	U129	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-
U064	189-55-9	Benzo(rst)pentaphene	U057	108-94-1	Cyclohexanone (I)
U248	(1)81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, and salts, when present at concentrations of 0.3% or less	U130	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-
U022	50-32-8	Benzo(a)pyrene			
U197	106-51-4	p-Benzoquinone			
U023	98-07-7	Benzotrichloride (C,R,T)			

U058	50-18-0	Cyclophosphamide	U112	141-78-6	Ethyl acetate (I)
U240	(1)94-75-7	2,4-D, salts and esters	U113	140-88-5	Ethyl acrylate (I)
U059	20830-81-3	Daunomycin	U238	51-79-6	Ethyl carbamate (urethane)
U060	72-54-8	DDD	U117	60-29-7	Ethyl ether (I)
U061	50-29-3	DDT	U114	(1)111-54-6	Ethylenebisdithiocarbamic acid, salts and esters
U062	2303-16-4	Diallate	U067	106-93-4	Ethylene dibromide
U063	53-70-3	Dibenz(a,h)anthracene	U077	107-06-2	Ethylene dichloride
U064	189-55-9	Dibenzo(a,i)pyrene	U359	110-80-5	Ethylene glycol monoethyl ether
U066	96-12-8	1,2-Dibromo-3-chloropropane	U115	75-21-8	Ethylene oxide (I,T)
U069	84-74-2	Dibutyl phthalate	U116	96-45-7	Ethylenethiourea
U070	95-50-1	o-Dichlorobenzene	U076	75-34-3	Ethylidene dichloride
U071	541-73-1	m-Dichlorobenzene	U118	97-63-2	Ethyl methacrylate
U072	106-46-7	p-Dichlorobenzene	U119	62-50-0	Ethyl methanesulfonate
U073	91-94-1	3,3'-Dichlorobenzidine	U120	206-44-0	Fluoranthene
U074	764-41-0	1,4-Dichloro-2-butene (I,T)	U122	50-00-0	Formaldehyde
U075	75-71-8	Dichlorodifluoromethane	U123	64-18-6	Formic acid (C,T)
U078	75-35-4	1,1-Dichloroethylene	U124	110-00-9	Furan (I)
U079	156-60-5	1,2-Dichloroethylene	U125	98-01-1	2-Furancarboxaldehyde (I)
U025	111-44-4	Dichloroethyl ether	U147	108-31-6	2,5-Furandione
U027	108-60-1	Dichloroisopropyl ether	U213	109-99-9	Furan, tetrahydro-(I)
U024	111-91-1	Dichloromethoxy ethane	U125	98-01-1	Furfural (I)
U081	120-83-2	2,4-Dichlorophenol	U124	110-00-9	Furfuran (I)
U082	87-65-0	2,6-Dichlorophenol	U206	18883-66-4	Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-, D-
U084	542-75-6	1,3-Dichloropropene	U206	18883-66-4	D-Glucose, 2-deoxy-2-((methylnitrosoamino)-carbonyl)amino-
U085	1464-53-5	1,2:3,4-Diepoxybutane (I,T)	U126	765-34-4	Glycidylaldehyde
U108	123-91-1	1,4-Diethyleneoxide	U163	70-25-7	Guanidine, N-methyl-N'-nitro-N-nitroso-
U028	117-81-7	Diethylhexyl phthalate	U127	118-74-1	Hexachlorobenzene
U395	5952-26-1	Diethylene glycol, dicarbamate.	U128	87-68-3	Hexachlorobutadiene
U086	1615-80-1	N,N'-Diethylhydrazine	U130	77-47-4	Hexachlorocyclopentadiene
U087	3288-58-2	0,0-Diethyl S-methyl dithiophosphate	U131	67-72-1	Hexachloroethane
U088	84-66-2	Diethyl phthalate	U132	70-30-4	Hexachlorophene
U089	56-53-1	Diethylstilbestrol	U243	1888-71-7	Hexachloropropene
U090	94-58-6	Dihydrosafrole	U133	302-01-2	Hydrazine (R,T)
U091	119-90-4	3,3'-Dimethoxybenzidine	U086	1615-80-1	Hydrazine, 1,2-diethyl-
U092	124-40-3	Dimethylamine (I)	U098	57-14-7	Hydrazine, 1,1-dimethyl-
U093	60-11-7	p-Dimethylaminoazobenzene	U099	540-73-8	Hydrazine, 1,2-dimethyl-
U094	57-97-6	7,12-Dimethylbenz(a)anthracene	U109	122-66-7	Hydrazine, 1,2-diphenyl-
U095	119-93-7	3,3'-Dimethylbenzidine	U134	7664-39-3	Hydrofluoric acid (C,T)
U096	80-15-9	alpha, alpha-Dimethylbenzylhydroperoxide (R)	U134	7664-39-3	Hydrogen fluoride (C,T)
U097	79-44-7	Dimethylcarbamoyl chloride	U135	7783-06-4	Hydrogen sulfide
U098	57-14-7	1,1-Dimethylhydrazine	U135	7783-06-4	Hydrogen sulfide H2 S
U099	540-73-8	1,2-Dimethylhydrazine	U096	80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl-(R)
U101	105-67-9	2,4-Dimethylphenol	U116	96-45-7	2-Imidazolidinethione
U102	131-11-3	Dimethyl phthalate	U137	193-39-5	Indeno(1,2,3-cd)pyrene
U103	77-78-1	Dimethyl sulfate	U190	85-44-9	1,3-Isobenzofuranidone
U105	121-14-2	2,4-Dinitrotoluene	U140	78-83-1	Isobutyl alcohol (I,T)
U106	606-20-2	2,6-Dinitrotoluene	U141	120-58-1	Isosafrole
U107	117-84-0	Di-n-octyl phthalate	U142	143-50-0	Kepone
U108	123-91-1	1,4-Dioxane	U143	303-34-4	Lasiocarpine
U109	122-66-7	1,2-Diphenylhydrazine	U144	301-04-2	Lead acetate
U110	142-84-7	Dipropylamine (I)	U146	1335-32-6	Lead, bis(acetato-0)tetrahydroxytri-
U111	621-64-7	Di-n-propylnitrosamine	U145	7446-27-7	Lead phosphate
U041	106-89-8	Epichlorohydrin	U146	1335-32-6	Lead subacetate
U001	75-07-0	Ethanal (I)	U129	58-89-9	Lindane
U404	121-44-8	Ethanamine, N,N-diethyl-	U163	70-25-7	MNNG
U174	55-18-5	Ethanamine, N-ethyl-N-nitroso-	U147	108-31-6	Maleic anhydride
U155	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-	U148	123-33-1	Maleic hydrazide
U067	106-93-4	Ethane, 1,2-dibromo-	U149	109-77-3	Malononitrile
U076	75-34-3	Ethane, 1,1-dichloro-	U150	148-82-3	Melphalan
U077	107-06-2	Ethane, 1,2-dichloro-	U151	7439-97-6	Mercury
U131	67-72-1	Ethane, hexachloro-	U152	126-98-7	Methacrylonitrile (I, T)
U024	111-91-1	Ethane, 1,1'-(methylenebis(oxy))bis(2-chloro-	U092	124-40-3	Methanamine, N-methyl- (I)
U117	60-29-7	Ethane, 1,1'-oxybis-(I)	U029	74-83-9	Methane, bromo-
U025	111-44-4	Ethane, 1,1'-oxybis(2-chloro-	U045	74-87-3	Methane, chloro- (I, T)
U184	76-01-7	Ethane, pentachloro-	U046	107-30-2	Methane, chloromethoxy-
U208	630-20-6	Ethane, 1,1,1,2-tetrachloro-	U068	74-95-3	Methane, dibromo-
U209	79-34-5	Ethane, 1,1,2,2-tetrachloro-	U080	75-09-2	Methane, dichloro-
U218	62-55-5	Ethanethioamide	U075	75-71-8	Methane, dichlorodifluoro-
U226	71-55-6	Ethane, 1,1,1-trichloro-	U138	74-88-4	Methane, iodo-
U227	79-00-5	Ethane, 1,1,2-trichloro-	U119	62-50-0	Methanesulfonic acid, ethyl ester
U410	59669-26-0	Ethanimidothioic acid, N,N'-(thiobis(methylimino)carbonyloxy))bis-, dimethyl ester	U211	56-23-5	Methane, tetrachloro-
U394	30558-43-1	Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-, methyl ester.	U153	74-93-1	Methanethiol (I, T)
U359	110-80-5	Ethanol, 2-ethoxy-	U225	75-25-2	Methane, tribromo-
U173	1116-54-7	Ethanol, 2,2'-(nitrosoimino)bis-	U044	67-66-3	Methane, trichloro-
U395	5952-26-1	Ethanol, 2,2'-oxybis-, dicarbamate.	U121	75-69-4	Methane, trichlorofluoro-
U004	98-86-2	Ethanone, 1-phenyl-	U036	57-74-9	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-
U043	75-01-4	Ethene, chloro-	U154	67-56-1	Methanol (I)
U042	110-75-8	Ethene, (2-chloroethoxy)-	U155	91-80-5	Methapyrilene
U078	75-35-4	Ethene, 1,1-dichloro-	U142	143-50-0	1,3,4-Metheno-2H-cyclobuta(cd)pentalen-2-one, 1,1a,3,3a,4,5,5a,5b,6-
U079	156-60-5	Ethene, 1,2-dichloro-, (E)-			
U210	127-18-4	Ethene, tetrachloro-			
U228	79-01-6	Ethene, trichloro-			

U247	72-43-5	decachlorooctahydro-	U189	1314-80-3	methyl ester
U154	67-56-1	Methoxychlor	U190	85-44-9	Phosphorus sulfide (R)
U029	74-83-9	Methyl alcohol (I)	U191	109-06-8	Phthalic anhydride
U186	504-60-9	Methyl bromide	U179	100-75-4	2-Picoline
U045	74-87-3	1-Methylbutadiene (I)	U192	23950-58-5	Piperidine, 1-nitroso-
U156	79-22-1	Methyl chloride (I,T)	U194	107-10-8	Pronamide
U226	71-55-6	Methyl chloroform	U111	621-64-7	1-Propanamine (I,T)
U157	56-49-5	3-Methylcholanthrene	U110	142-84-7	1-Propanamine, N-nitroso-N-propyl-
U158	101-14-4	4,4'-Methylenebis(2-chloroaniline)	U066	96-12-8	1-Propanamine, N-propyl- (I)
U068	74-95-3	Methylene bromide	U083	78-87-5	Propane, 1,2-dibromo-3-chloro-
U080	75-09-2	Methylene chloride	U149	109-77-3	Propane, 1,2-dichloro-
U159	78-93-3	Methyl ethyl ketone (MEK) (I,T)	U171	79-46-9	Propanedinitrile
U160	1338-23-4	Methyl ethyl ketone peroxide (R,T)	U027	108-60-1	Propane, 2-nitro- (I,T)
U138	74-88-4	Methyl iodide	U193	1120-71-4	Propane, 2,2'-oxybis(2-chloro-
U161	108-10-1	Methyl isobutyl ketone (I)	See F027	93-72-1	1,3-Propane sultone
U162	80-62-6	Methyl methacrylate (I,T)	U235	126-72-7	Propanoic acid, 2-(2,4,5-
U161	108-10-1	4-Methyl-2-pentanone (I)	U140	78-83-1	trichlorophenoxy)-
U164	56-04-2	Methylthiouracil	U002	67-64-1	1-Propanol, 2,3-dibromo-, phosphate
U010	50-07-7	Mitomycin C	U007	79-06-1	(3:1)
U059	20830-81-3	5,12-Naphthalenedione, 8-acetyl-10-	U084	542-75-6	1-Propanol, 2-methyl- (I,T)
		((3-amino-2,3,6-trideoxy)-alpha-L-	U243	1888-71-7	2-Propanone (I)
		lyxo-hexopyranosyl)oxy)-7,8,9,10-	U009	107-13-1	2-Propenamides
		tetrahydro-6,8,11-trihydroxy-1-	U152	126-98-7	1-Propene, 1,3-dichloro-
		methoxy-, (8S-cis)-	U008	79-10-7	1-Propene, 1,1,2,3,3,3-hexachloro-
U167	134-32-7	1-Naphthalenamine	U113	140-88-5	2-Propenenitrile
U168	91-59-8	2-Naphthalenamine	U118	97-63-2	2-Propenenitrile, 2-methyl- (I,T)
U026	494-03-1	Naphthalenamine, N,N'-bis(2-	U162	80-62-6	2-Propenoic acid (I)
		chloroethyl)-			2-Propenoic acid, ethyl ester (I)
U165	91-20-3	Naphthalene			2-Propenoic acid, 2-methyl-, ethyl
U047	91-58-7	Naphthalene, 2-chloro-			ester
U166	130-15-4	1,4-Naphthalenedione	U373	122-42-9	2-Propenoic acid, 2-methyl-, methyl
U236	72-57-1	2,7-Naphthalenedisulfonic acid, 3,3'-	U411	114-26-1	ester (I,T)
		((3,3'- dimethyl(1,1'-biphenyl)-4,4'-	U387	52888-80-9	Propam.
		diyl)bis(azo)bis(5-amino-4-hydroxy)-,	U194	107-10-8	Propoxur.
		tetrasodium salt	U083	78-87-5	Prosulfocarb.
U279	63-25-2	1-Naphthalenol, methylcarbamate.	U148	123-33-1	n-Propylamine (I,T)
U166	130-15-4	1,4-Naphthoquinone	U196	110-86-1	Propylene dichloride
U167	134-32-7	alpha-Naphthylamine	U191	109-06-8	3,6-Pyridazinedione, 1,2-dihydro-
U168	91-59-8	beta-Naphthylamine	U237	66-75-1	Pyridine
U217	10102-45-1	Nitric acid, thallium(I+) salt	U180	930-55-2	Pyridine, 2-methyl-
U169	98-95-3	Nitrobenzene (I,T)	U200	50-55-5	2,4-(1H,3H)-Pyrimidinedione, 5-(bis(2-
U170	100-02-7	p-Nitrophenol	U201	108-46-3	chloroethyl)amino)-
U171	79-46-9	2-Nitropropane (I,T)	U203	94-59-7	4(1H)-Pyrimidinone, 2,3-dihydro-6-
U172	924-16-3	N-Nitrosodi-n-butylamine	U204	7783-00-8	methyl-2-
U173	1116-54-7	N-Nitrosodiethanolamine	U205	7488-56-4	thio-
U174	55-18-5	N-Nitrosodiethylamine	U205	7488-56-4	Pyrrolidine, 1-nitroso-
U176	759-73-9	N-Nitroso-N-methylurea	U015	115-02-6	Reserpine
U177	684-93-5	N-Nitroso-N-methylurea	See F027	93-72-1	Resorcinol
U178	615-53-2	N-Nitroso-N-methylurethane	U206	18883-66-4	Safrole
U179	100-75-4	N-Nitrosopiperidine	U103	77-78-1	Selenious acid
U180	930-55-2	N-Nitrosopyrrolidine	U189	1314-80-3	Selenium dioxide
U181	99-55-8	5-Nitro-o-toluidine	See F027	93-76-5	Selenium sulfide
U193	1120-71-4	1,2-Oxathiolane, 2,2-dioxide	U207	95-94-3	Selenium sulfide SeS2 (R,T)
U058	50-18-0	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-	U208	630-20-6	L-Serine, diazoacetate (ester)
		bis(2-chloroethyl)tetrahydro-, 2-oxide	U209	79-34-5	Silvex (2,4,5-TP)
U115	75-21-8	Oxirane (I,T)	U210	127-18-4	Streptozotocin
U126	765-34-4	Oxiranecarboxaldehyde	U213	109-99-9	Sulfuric acid, dimethyl ester
U041	106-89-8	Oxirane, (chloromethyl)-	U214	563-68-8	Sulfur phosphide (R)
U182	123-63-7	Paraldehyde	U215	6533-73-9	2,4,5-T
U183	608-93-5	Pentachlorobenzene	U216	7791-12-0	1,2,4,5-Tetrachlorobenzene
U184	76-01-7	Pentachloroethane	U217	10102-45-1	1,1,1,2-Tetrachloroethane
U185	82-68-8	Pentachloronitrobenzene (PCNB)	U218	62-55-5	1,1,2,2-Tetrachloroethane
See F027	87-86-5	Pentachlorophenol	U410	59669-26-0	Tetrachloroethylene
U161	108-10-1	Pentanol, 4-methyl-	U153	74-93-1	2,3,4,6-Tetrachlorophenol
U186	504-60-9	1,3-Pentadiene (I)	U244	137-26-8	Tetrahydrofuran (I)
U187	62-44-2	Phenacetin	U220	108-88-3	Thallium(I) acetate
U188	108-95-2	Phenol	U221	25376-45-8	Thallium(I) carbonate
U048	95-57-8	Phenol, 2-chloro-	U222	26471-62-5	Thallium(I) chloride
U039	59-50-7	Phenol, 4-chloro-3-methyl-	U328	95-53-4	thallium chloride TICl
U081	120-83-2	Phenol, 2,4-dichloro-	U353	106-49-0	Thallium(I) nitrate
U082	87-65-0	Phenol, 2,6-dichloro-	U222	636-21-5	Thioacetamide
U089	56-53-1	Phenol, 4,4'-(1,2-diethyl-1,2-	U389	2303-17-5	Thiodicarb.
		ethenediyl)bis-, (E)-	U011	61-82-5	Thiomethanol (I,T)
U101	105-67-9	Phenol, 2,4-dimethyl-	U226	71-55-6	Thioperoxydicarbonic diamide ((H2
U052	1319-77-3	Phenol, methyl-	U227	79-00-5	N)C(S)2 S2, tetramethyl-
U132	70-30-4	Phenol, 2,2'-methylenebis(3,4,6-	U228	79-01-6	Thiophanate-methyl.
		trichloro-			Thiourea
U411	114-26-1	Phenol, 2-(1-methylethoxy)-,			Thiram
		methylcarbamate.			Toluene
U170	100-02-7	Phenol, 4-nitro-			Toluenediamine
See F027	87-86-5	Phenol, pentachloro-			Toluene diisocyanate (R,T)
See F027	58-90-2	Phenol, 2,3,4,6-tetrachloro-			o-Toluidine
See F027	95-95-4	Phenol, 2,4,5-trichloro-			p-Toluidine
See F027	88-06-2	Phenol, 2,4,6-trichloro-			o-Toluidine hydrochloride
U150	148-82-3	L-Phenylalanine, 4-(bis(2-			Triallate.
		chloroethyl)amino)-			1H-1,2,4-Triazol-3-amine
U145	7446-27-7	Phosphoric acid, lead(2+) salt (2:3)			1,1,1-Trichloroethane
U087	3288-58-2	Phosphorodithioic acid, 0,0-diethyl S-			1,1,2-Trichloroethane
					Trichloroethylene

U121	75-69-4	Trichloromonofluoromethane	U034	75-87-6	Acetaldehyde, trichloro-
See F027	95-95-4	2,4,5-Trichlorophenol	U034	75-87-6	Chloral
See F027	88-06-2	2,4,6-Trichlorophenol	U035	305-03-3	Benzenebutanoic acid, 4-(bis(2-chloroethyl)amino)-
U404	121-44-8	Triethylamine.			Chlorambucil
U234	99-35-4	1,3,5-Trinitrobenzene (R,T)	U035	305-03-3	Chlordane, alpha and gamma isomers
U182	123-63-7	1,3,5-Trioxane, 2,4,6-trimethyl-	U036	57-74-9	4,7-Methano-1H-indene,
U235	126-72-7	Tris(2,3-dibromopropyl) phosphate	U036	57-74-9	1,2,4,5,6,7,8,8-octachloro-
U236	72-57-1	Trypan blue			2,3,3a,4,7,7a-hexahydro-
U237	66-75-1	Uracil shallard	U037	108-90-7	Benzene, chloro-
U176	759-73-9	Urea, N-ethyl-N-nitroso-	U037	108-90-7	Chlorobenzene
U177	684-93-5	Urea, N-methyl-N-nitroso-	U038	510-15-6	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester
U043	75-01-4	Vinyl chloride			Chlorobenzilate
U248	(1)81-81-2	Warfarin, and salts, when present at concentrations of 0.3% or less	U038	510-15-6	p-Chloro-m-cresol
U239	1330-20-7	Xylene (I)	U039	59-50-7	Phenol, 4-chloro-3-methyl-
U200	50-55-5	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-((3,4,5-trimethoxybenzoyl)oxy)-, methyl ester, (3beta,16beta, 17alpha,18beta, 20alpha)-	U039	59-50-7	Epichlorohydrin
			U041	106-89-8	Oxirane, (chloromethyl)-
U249	1314-84-7	Zinc phosphide Zn ₃ P ₂ , when present at concentrations of 10% or less	U041	106-89-8	2-Chloroethyl vinyl ether
			U042	110-75-8	Ethene, (2-chloroethoxy)-
U001	75-07-0	Acetaldehyde (I)	U042	110-75-8	Ethene, chloro-
U001	75-07-0	Ethanal (I)	U043	75-01-4	Vinyl chloride
U002	67-64-1	Acetone (I)	U043	75-01-4	Chloroform
U002	67-64-1	2-Propanone (I)	U044	67-66-3	Methane, trichloro-
U003	75-05-8	Acetonitrile (I,T)	U044	67-66-3	Methane, chloro- (I,T)
U004	98-86-2	Acetophenone	U045	74-87-3	Methyl chloride (I,T)
U004	98-86-2	Ethanone, 1-phenyl-	U045	74-87-3	Chloromethyl methyl ether
U005	53-96-3	Acetamide, -9H-fluoren-2-yl-	U046	107-30-2	Methane, chloromethoxy-
U005	53-96-3	2-Acetylaminofluorene	U046	107-30-2	beta-Chloronaphthalene
U006	75-36-5	Acetyl chloride (C,R,T)	U047	91-58-7	Naphthalene, 2-chloro-
U007	79-06-1	Acrylamide	U047	91-58-7	o-Chlorophenol
U007	79-06-1	2-Propenamide	U048	95-57-8	Phenol, 2-chloro-
U008	79-10-7	Acrylic acid (I)	U048	95-57-8	Benzenamine, 4-chloro-2-methyl-, hydrochloride
U008	79-10-7	2-Propenoic acid (I)	U049	3165-93-3	4-Chloro-o-toluidine, hydrochloride
U009	107-13-1	Acrylonitrile	U050	218-01-9	Chrysene
U009	107-13-1	2-Propenenitrile	U051		Creosote
U010	50-07-7	Azirino(2',3':3,4)pyrrolo(1,2-a)indole-4,7-dione, 6-amino-8-((aminocarbonyl)oxy)methyl)-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, (1aS-(1aalpha, 8beta, 8aalpha,8balpha))-	U052	1319-77-3	Cresol (Cresylic acid)
U010	50-07-7	Mitomycin C	U052	1319-77-3	Phenol, methyl-
U011	61-82-5	Amitrole	U053	4170-30-3	2-Butenal
U011	61-82-5	1H-1,2,4-Triazol-3-amine	U053	4170-30-3	Crotonaldehyde
U012	62-53-3	Aniline (I,T)	U055	98-82-8	Benzene, (1-methylethyl)-(I)
U012	62-53-3	Benzenamine (I,T)	U055	98-82-8	Cumene (I)
U014	492-80-8	Auramine	U056	110-82-7	Benzene, hexahydro-(I)
U014	492-80-8	Benzenamine, 4,4'-carbonimidoylbis(N,N-dimethyl)-Azaserine	U056	110-82-7	Cyclohexane (I)
U015	115-02-6	L-Serine, diazoacetate (ester)	U057	108-94-1	Cyclohexanone (I)
U015	115-02-6	L-Serine, diazoacetate (ester)	U058	50-18-0	Cyclophosphamide
U016	225-51-4	Benz(c)acridine	U058	50-18-0	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide
U017	98-87-3	Benzal chloride	U059	20830-81-3	Daunomycin
U017	98-87-3	Benzene, (dichloromethyl)-	U059	20830-81-3	5,12-Naphthacenedione, 8-acetyl-10-((3-amino-2,3,6-trideoxy)-alpha-L-lyxohexopyranosyl)oxy)-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-
U018	56-55-3	Benz(a)anthracene	U060	72-54-8	Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro-
U019	71-43-2	Benzene (I,T)	U060	72-54-8	DDD
U020	98-09-9	Benzenesulfonic acid chloride (C,R)	U061	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4-chloro-
U020	98-09-9	Benzenesulfonyl chloride (C,R)	U061	50-29-3	DDT
U021	92-87-5	Benzidine	U062	2303-16-4	Carbamothioic acid, bis(1-methylethyl)-, S- (2,3-dichloro-2-propenyl) ester
U021	92-87-5	(1,1'-Biphenyl)-4,4'-diamine	U062	2303-16-4	Diallate
U022	50-32-8	Benzo(a)pyrene	U063	53-70-3	Dibenz(a,h)anthracene
U023	98-07-7	Benzene, (trichloromethyl)-	U064	189-55-9	Benzo(rst)pentaphene
U023	98-07-7	Benzotrithloride (C,R,T)	U064	189-55-9	Dibenzo(a,i)pyrene
U024	111-91-1	Dichloromethoxy ethane	U066	96-12-8	1,2-Dibromo-3-chloropropane
U024	111-91-1	Ethane, 1,1'-(methylenebis(oxy))bis(2-chloro-	U066	96-12-8	Propane, 1,2-dibromo-3-chloro-
U025	111-44-4	Dichloroethyl ether	U067	106-93-4	Ethane, 1,2-dibromo-
U025	111-44-4	Ethane, 1,1'-oxybis(2-chloro-	U067	106-93-4	Ethylene dibromide
U026	494-03-1	Chlornaphazin	U068	74-95-3	Methane, dibromo-
U026	494-03-1	Naphthalenamine, N,N'-bis(2-chloroethyl)-	U068	74-95-3	Methylene bromide
U027	108-60-1	Dichloroisopropyl ether	U069	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester
U027	108-60-1	Propane, 2,2'-oxybis(2-chloro-	U069	84-74-2	Dibutyl phthalate
U028	117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	U070	95-50-1	Benzene, 1,2-dichloro-
U028	117-81-7	Diethylhexyl phthalate	U070	95-50-1	o-Dichlorobenzene
U029	74-83-9	Methane, bromo-	U071	541-73-1	Benzene, 1,3-dichloro-
U029	74-83-9	Methyl bromide	U071	541-73-1	m-Dichlorobenzene
U030	101-55-3	Benzene, 1-bromo-4-phenoxy-	U072	106-46-7	Benzene, 1,4-dichloro-
U030	101-55-3	4-Bromophenyl phenyl ether	U072	106-46-7	p-Dichlorobenzene
U031	71-36-3	1-Butanol (I)	U073	91-94-1	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dichloro-
U031	71-36-3	n-Butyl alcohol (I)	U073	91-94-1	3,3'-Dichlorobenzidine
U032	13765-19-0	Calcium chromate	U074	764-41-0	2-Butene, 1,4-dichloro-(I,T)
U032	13765-19-0	Chromic acid H ₂ CrO ₄ , calcium salt			
U033	353-50-4	Carbonic difluoride			
U033	353-50-4	Carbon oxyfluoride (R,T)			

U074	764-41-0	1,4-Dichloro-2-butene (I,T)	U115	75-21-8	Ethylene oxide (I,T)
U075	75-71-8	Dichlorodifluoromethane	U115	75-21-8	Oxirane (I,T)
U075	75-71-8	Methane, dichlorodifluoro-	U116	96-45-7	Ethylenethiourea
U076	75-34-3	Ethane, 1,1-dichloro-	U116	96-45-7	2-Imidazolidinethione
U076	75-34-3	Ethylidene dichloride	U117	60-29-7	Ethane, 1,1'-oxybis-(I)
U077	107-06-2	Ethane, 1,2-dichloro-	U117	60-29-7	Ethyl ether (I)
U077	107-06-2	Ethylene dichloride	U118	97-63-2	Ethyl methacrylate
U078	75-35-4	1,1-Dichloroethylene	U118	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester
U078	75-35-4	Ethene, 1,1-dichloro-			
U079	156-60-5	1,2-Dichloroethylene	U119	62-50-0	Ethyl methanesulfonate
U079	156-60-5	Ethene, 1,2-dichloro-, (E)-	U119	62-50-0	Methanesulfonic acid, ethyl ester
U080	75-09-2	Methane, dichloro-	U120	206-44-0	Fluoranthene
U080	75-09-2	Methylene chloride	U121	75-69-4	Methane, trichlorofluoro-
U081	120-83-2	2,4-Dichlorophenol	U121	75-69-4	Trichloromonofluoromethane
U081	120-83-2	Phenol, 2,4-dichloro-	U122	50-00-0	Formaldehyde
U082	87-65-0	2,6-Dichlorophenol	U123	64-18-6	Formic acid (C,T)
U082	87-65-0	Phenol, 2,6-dichloro-	U124	110-00-9	Furan (I)
U083	78-87-5	Propane, 1,2-dichloro-	U124	110-00-9	Furfuran (I)
U083	78-87-5	Propylene dichloride	U125	98-01-1	2-Furancarboxaldehyde (I)
U084	542-75-6	1,3-Dichloropropene	U125	98-01-1	Furfural (I)
U084	542-75-6	1-Propene, 1,3-dichloro-	U126	765-34-4	Glycidylaldehyde
U085	1464-53-5	2,2'-Bioxirane	U126	765-34-4	Oxiranecarboxyaldehyde
U085	1464-53-5	1,2,3,4-Diepoxybutane (I,T)	U127	118-74-1	Benzene, hexachloro-
U086	1615-80-1	N,N'-Diethylhydrazine	U127	118-74-1	Hexachlorobenzene
U086	1615-80-1	Hydrazine, 1,2-diethyl-	U128	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
U087	3288-58-2	0,0-Diethyl S-methyl dithiophosphate	U128	87-68-3	Hexachlorobutadiene
U087	3288-58-2	Phosphorodithioic acid, 0,0-diethyl S-methyl ester	U129	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-
U088	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester	U129	58-89-9	Lindane
U088	84-66-2	Diethyl phthalate	U130	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-
U089	56-53-1	Diethylstilbestero	U130	77-47-4	Hexachlorocyclopentadiene
U089	56-53-1	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)-	U131	67-72-1	Ethane, hexachloro-
U090	94-58-6	1,3-Benzodioxole, 5-propyl-	U131	67-72-1	Hexachloroethane
U090	94-58-6	Dihydrosafrole	U132	70-30-4	Hexachlorophene
U091	119-90-4	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethoxy-	U132	70-30-4	Phenol, 2,2'-methylenebis(3,4,6-trichloro-
U091	119-90-4	3,3'-Dimethoxybenzidine	U133	302-01-2	Hydrazine (R,T)
U092	124-40-3	Dimethylamine (I)	U134	7664-39-3	Hydrofluoric acid (C,T)
U092	124-40-3	Methanamine, -methyl-(I)	U134	7664-39-3	Hydrogen fluoride (C,T)
U093	60-11-7	Benzenamine, N,N-dimethyl-4-(phenylazo)-	U135	7783-06-4	Hydrogen sulfide
U093	60-11-7	p-Dimethylaminoazobenzene	U135	7783-06-4	Hydrogen sulfide H2S
U094	57-97-6	Benz(a)anthracene, 7,12-dimethyl-	U136	75-60-5	Arsinic acid, dimethyl-
U094	57-97-6	7,12-Dimethylbenz(a)anthracene	U136	75-60-5	Cacodylic acid
U095	119-93-7	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethyl-	U137	193-39-5	Indeno(1,2,3-cd)pyrene
U095	119-93-7	3,3'-Dimethylbenzidine	U138	74-88-4	Methane, iodo-
U096	80-15-9	alpha,alpha-Dimethylbenzylhydroperoxide (R)	U138	74-88-4	Methyl iodide
U096	80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl-(R)	U140	78-83-1	Isobutyl alcohol (I,T)
U097	79-44-7	Carbamic chloride, dimethyl-	U140	78-83-1	1-Propanol, 2-methyl- (I,T)
U097	79-44-7	Dimethylcarbonyl chloride	U141	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-
U098	57-14-7	1,1-Dimethylhydrazine	U141	120-58-1	Isosafrole
U098	57-14-7	Hydrazine, 1,1-dimethyl-	U142	143-50-0	Kepone
U099	540-73-8	1,2-Dimethylhydrazine	U142	143-50-0	1,3,4-Metheno-2H-cyclobuta(cd)pentalen-2-one, 1,1a,3,3a,4,5,5a,5b,6,6-decachlorooctahydro-
U099	540-73-8	Hydrazine, 1,2-dimethyl-	U143	303-34-4	2-Butenoic acid, 2-methyl-, 7-((2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy)methyl)-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, (1S-(1alpha(Z),7(2S*,3R*)),7alpha))-
U101	105-67-9	2,4-Dimethylphenol			
U101	105-67-9	Phenol, 2,4-dimethyl-			
U102	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester			
U102	131-11-3	Dimethyl phthalate	U143	303-34-4	Lasiocarpine
U103	77-78-1	Dimethyl sulfate	U144	301-04-2	Acetic acid, lead(2+) salt
U103	77-78-1	Sulfuric acid, dimethyl ester	U144	301-04-2	Lead acetate
U105	121-14-2	Benzene, 1-methyl-2,4-dinitro-	U145	7446-27-7	Lead phosphate
U105	121-14-2	2,4-Dinitrotoluene	U145	7446-27-7	Phosphoric acid, lead(2+) salt (2:3)
U106	606-20-2	Benzene, 2-methyl-1,3-dinitro-	U146	1335-32-6	Lead, bis(acetato-0)tetrahydroxytri-
U106	606-20-2	2,6-Dinitrotoluene	U146	1335-32-6	Lead subacetate
U107	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester	U147	108-31-6	2,5-Furandione
U107	117-84-0	Di-n-octyl phthalate	U147	108-31-6	Maleic anhydride
U108	123-91-1	1,4-Diethyleneoxide	U148	123-33-1	Maleic hydrazide
U108	123-91-1	1,4-Dioxane	U148	123-33-1	3,6-Pyridazinedione, 1,2-dihydro-
U109	122-66-7	1,2-Diphenylhydrazine	U149	109-77-3	Malononitrile
U109	122-66-7	Hydrazine, 1,2-diphenyl-	U149	109-77-3	Propanedinitrile
U110	142-84-7	Dipropylamine (I)	U150	148-82-3	Melphalan
U110	142-84-7	1-Propanamine, N-propyl-(I)	U150	148-82-3	L-Phenylalanine, 4-(bis(2-chloroethyl)amino)-
U111	621-64-7	Di-n-propylnitrosamine	U151	7439-97-6	Mercury
U111	621-64-7	1-Propanamine, N-nitroso-N-propyl-	U152	126-98-7	Methacrylonitrile (I,T)
U112	141-78-6	Acetic acid ethyl ester (I)	U152	126-98-7	2-Propenenitrile, 2-methyl- (I,T)
U112	141-78-6	Ethyl acetate (I)	U153	74-93-1	Methanethiol (I,T)
U113	140-88-5	Ethyl acrylate (I)	U153	74-93-1	Thiomethanol (I,T)
U113	140-88-5	2-Propenoic acid, ethyl ester (I)	U154	67-56-1	Methanol (I)
U114	(1)111-54-6	Carbamodithioic acid, 1,2-ethanediybis-, salts and esters	U154	67-56-1	Methyl alcohol (I)
U114	(1)111-54-6	Ethylenebisdithiocarbamic acid, salts and esters	U155	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-Methapyriline

U156	79-22-1	Carbonochloridic acid, methyl ester (I,T)			ester, (3beta,16beta,17alpha,18beta, 20alpha)-
U156	79-22-1	Methyl chlorocarbonate (I,T)	U201	108-46-3	1,3-Benzenediol
U157	56-49-5	Benz(j)aceanthrylene, 1,2-dihydro-3-methyl-	U201	108-46-3	Resorcinol
U157	56-49-5	3-Methylcholanthrene	U203	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-
U158	101-14-4	Benzenamine, 4,4'-methylenebis(2-chloro-	U203	94-59-7	Safrole
U158	101-14-4	4,4'-Methylenebis(2-chloroaniline)	U204	7783-00-8	Selenious acid
U159	78-93-3	2-Butanone (I,T)	U204	7783-00-8	Selenium dioxide
U159	78-93-3	Methyl ethyl ketone (MEK) (I,T)	U205	7488-56-4	Selenium sulfide
U160	1338-23-4	2-Butanone, peroxide (R,T)	U205	7488-56-4	Selenium sulfide SeS2 (R,T)
U160	1338-23-4	Methyl ethyl ketone peroxide (R,T)	U206	18883-66-4	Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-, D-
U161	108-10-1	Methyl isobutyl ketone (I)	U206	18883-66-4	D-Glucose, 2-deoxy-2-((methylnitrosoamino)-carbonyl)amino)-
U161	108-10-1	4-Methyl-2-pentanone (I)	U206	18883-66-4	Streptozotocin
U161	108-10-1	Pentanol, 4-methyl-	U207	95-94-3	Benzene, 1,2,4,5-tetrachloro-
U162	80-62-6	Methyl methacrylate (I,T)	U207	95-94-3	1,2,4,5-Tetrachlorobenzene
U162	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester (I,T)	U208	630-20-6	Ethane, 1,1,1,2-tetrachloro-
U163	70-25-7	Guanidine, -methyl-N'-nitro-N-nitroso-MNNG	U208	630-20-6	1,1,1,2-Tetrachloroethane
U164	56-04-2	Methylthiouracil	U209	79-34-5	Ethane, 1,1,2,2-tetrachloro-
U164	56-04-2	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-	U209	79-34-5	1,1,2,2-Tetrachloroethane
U165	91-20-3	Naphthalene	U210	127-18-4	Ethene, tetrachloro-
U166	130-15-4	1,4-Naphthalenedione	U210	127-18-4	Tetrachloroethylene
U166	130-15-4	1,4-Naphthoquinone	U211	56-23-5	Carbon tetrachloride
U167	134-32-7	1-Naphthalenamine	U211	56-23-5	Methane, tetrachloro-
U167	134-32-7	alpha-Naphthylamine	U213	109-99-9	Furan, tetrahydro-(I)
U168	91-59-8	2-Naphthalenamine	U213	109-99-9	Tetrahydrofuran (I)
U168	91-59-8	beta-Naphthylamine	U214	563-68-8	Acetic acid, thallium(1+) salt
U169	98-95-3	Benzene, nitro-	U214	563-68-8	Thallium(I) acetate
U169	98-95-3	Nitrobenzene (I,T)	U215	6533-73-9	Carbonic acid, dithallium(1+) salt
U170	100-02-7	p-Nitrophenol	U215	6533-73-9	Thallium(I) carbonate
U170	100-02-7	Phenol, 4-nitro-	U216	7791-12-0	Thallium(I) chloride
U171	79-46-9	2-Nitropropane (I,T)	U216	7791-12-0	Thallium chloride TlCl
U171	79-46-9	Propane, 2-nitro- (I,T)	U217	10102-45-1	Nitric acid, thallium(1+) salt
U172	924-16-3	1-Butanamine, N-butyl-N-nitroso-	U217	10102-45-1	Thallium(I) nitrate
U172	924-16-3	N-Nitrosodi-n-butylamine	U218	62-55-5	Ethanethioamide
U173	1116-54-7	Ethanol, 2,2'-(nitrosoimino)bis-	U218	62-55-5	Thioacetamide
U173	1116-54-7	N-Nitrosodiethanolamine	U219	62-56-6	Thiourea
U174	55-18-5	Ethanamine, -ethyl-N-nitroso-	U220	108-88-3	Benzene, methyl-
U174	55-18-5	N-Nitrosodiethylamine	U220	108-88-3	Toluene
U176	759-73-9	N-Nitroso-N-ethylurea	U221	25376-45-8	Benzenediamine, ar-methyl-
U176	759-73-9	Urea, N-ethyl-N-nitroso-	U221	25376-45-8	Toluenediamine
U177	684-93-5	N-Nitroso-N-methylurea	U222	636-21-5	Benzenamine, 2-methyl-, hydrochloride
U177	684-93-5	Urea, N-methyl-N-nitroso-	U222	636-21-5	o-Toluidine hydrochloride
U178	615-53-2	Carbamic acid, methylnitroso-, ethyl ester	U223	26471-62-5	Benzene, 1,3-diisocyanatomethyl- (R,T)
U178	615-53-2	N-Nitroso-N-methylurethane	U223	26471-62-5	Toluene diisocyanate (R,T)
U179	100-75-4	N-Nitrosopiperidine	U225	75-25-2	Bromoform
U179	100-75-4	Piperidine, 1-nitroso-	U225	75-25-2	Methane, tribromo-
U180	930-55-2	N-Nitrosopyrrolidine	U226	71-55-6	Ethane, 1,1,1-trichloro-
U180	930-55-2	Pyrrolidine, 1-nitroso-	U226	71-55-6	Methyl chloroform
U181	99-55-8	Benzenamine, 2-methyl-5-nitro-	U226	71-55-6	1,1,1-Trichloroethane
U181	99-55-8	5-Nitro-o-toluidine	U227	79-00-5	Ethane, 1,1,2-trichloro-
U182	123-63-7	1,3,5-Trioxane, 2,4,6-trimethyl-	U227	79-00-5	1,1,2-Trichloroethane
U182	123-63-7	Paraldehyde	U228	79-01-6	Ethene, trichloro-
U183	608-93-5	Benzene, pentachloro-	U228	79-01-6	Trichloroethylene
U183	608-93-5	Pentachlorobenzene	U234	99-35-4	Benzene, 1,3,5-trinitro-
U184	76-01-7	Ethane, pentachloro-	U234	99-35-4	1,3,5-Trinitrobenzene (R,T)
U184	76-01-7	Pentachloroethane	U235	126-72-7	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U185	82-68-8	Benzene, pentachloronitro-	U235	126-72-7	Tris(2,3-dibromopropyl) phosphate
U185	82-68-8	Pentachloronitrobenzene (PCNB)	U236	72-57-1	2,7-Naphthalenedisulfonic acid, 3,3'-((3,3'-dimethyl(1,1'-biphenyl)-4,4'-diyl)bis(azo)bis(5-amino-4-hydroxy)-, tetrasodium salt
U186	504-60-9	1-Methylbutadiene (I)	U236	72-57-1	Trypan blue
U186	504-60-9	1,3-Pentadiene (I)	U237	66-75-1	2,4-(1H,3H)-Pyrimidinedione, 5-(bis(2-chloroethyl)amino)-
U187	62-44-2	Acetamide, -(4-ethoxyphenyl)-	U237	66-75-1	Uracil shallard
U187	62-44-2	Phenacetin	U238	51-79-6	Carbamic acid, ethyl ester
U188	108-95-2	Phenol	U238	51-79-6	Ethyl carbamate (urethane)
U189	1314-80-3	Phosphorus sulfide (R)	U239	1330-20-7	Benzene, dimethyl- (I,T)
U189	1314-80-3	Sulfur phosphide (R)	U239	1330-20-7	Xylene (I)
U190	85-44-9	1,3-Isobenzofurandione	U240	(1)94-75-7	Acetic acid, (2,4-dichlorophenoxy)-, salts and esters
U190	85-44-9	Phthalic anhydride	U240	(1)94-75-7	2,4-D, salts and esters
U191	109-06-8	2-Picoline	U243	1888-71-7	Hexachloropropene
U191	109-06-8	Pyridine, 2-methyl-	U243	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-
U192	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	U244	137-26-8	Thioperoxydicarbonic diamide ((H2N)C(S))2 S2, tetramethyl-
U192	23950-58-5	Pronamide	U244	137-26-8	Thiram
U193	1120-71-4	1,2-Oxathiolane, 2,2-dioxide	U246	506-68-3	Cyanogen bromide (CN)Br
U193	1120-71-4	1,3-Propane sultone	U247	72-43-5	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4- methoxy-
U194	107-10-8	1-Propanamine (I,T)	U247	72-43-5	Methoxychlor
U194	107-10-8	n-Propylamine (I,T)	U248	(1)81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, and salts, when present at concentrations of 0.3% or less
U196	110-86-1	Pyridine			
U197	106-51-4	p-Benzoquinone			
U197	106-51-4	2,5-Cyclohexadiene-1,4-dione			
U200	50-55-5	Reserpine			
U200	50-55-5	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-((3,4,5-trimethoxybenzoyl)oxy)-, methyl			

U248	(1)81-81-2	Warfarin, and salts, when present at concentrations of 0.3% or less
U249	1314-84-7	Zinc phosphide Zn3 P2, when present at concentrations of 10% or less
U271	17804-35-2	Benomyl
U271	17804-35-2	Carbamic acid, (1-(butylamino)carbonyl)- (1H-benzimidazol-2-yl)-, methyl ester
U278	22781-23-3	Bendiocarb
U278	22781-23-3	1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate
U279	63-25-2	Carbaryl
U279	63-25-2	1-Naphthalenol, methylcarbamate
U280	101-27-9	Barban
U280	101-27-9	Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester
U328	95-53-4	Benzenamine, 2-methyl-
U328	95-53-4	o-Toluidine
U353	106-49-0	Benzenamine, 4-methyl-
U353	106-49-0	p-Toluidine
U359	110-80-5	Ethanol, 2-ethoxy-
U359	110-80-5	Ethylene glycol monoethyl ether
U364	22961-82-6	Bendiocarb phenol
U364	22961-82-6	1,3-Benzodioxol-4-ol, 2,2-dimethyl-,
U367	1563-38-8	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-
U367	1563-38-8	Carbofuran phenol
U372	10605-21-7	Carbamic acid, 1H-benzimidazol-2-yl, methyl ester
U372	10605-21-7	Carbendazim
U373	122-42-9	Carbamic acid, phenyl-, 1-methylethyl ester
U373	122-42-9	Propham
U387	52888-80-9	Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester
U387	52888-80-9	Prosulfocarb
U389	2303-17-5	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester
U389	2303-17-5	Triallate
U394	30558-43-1	A2213
U394	30558-43-1	Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-, methyl ester
U395	5952-26-1	Diethylene glycol, dicarbamate
U395	5952-26-1	Ethanol, 2,2'-oxybis-, dicarbamate
U404	121-44-8	Ethanamine, N,N-diethyl-
U404	121-44-8	Triethylamine
U409	23564-05-8	Carbamic acid, (1,2-phenylenebis(iminocarbonothioyl))bis-, dimethyl ester
U409	23564-05-8	Thiophanate-methyl
U410	59669-26-0	Ethanimidothioic acid, N,N'-(thiobis(methylimino)carbonyloxy) bis-, dimethyl ester
U410	59669-26-0	Thiodicarb
U411	114-26-1	Phenol, 2-(1-methylethoxy)-, methylcarbamate
U411	114-26-1	Propoxur
See F027	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-
See F027	7-86-5	Pentachlorophenol
See F027	87-86-5	Phenol, pentachloro-
See F027	58-90-2	Phenol, 2,3,4,6-tetrachloro-
See F027	95-95-4	Phenol, 2,4,5-trichloro-
See F027	88-06-2	Phenol, 2,4,6-trichloro-
See F027	93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-
See F027	93-72-1	Silvex (2,4,5-TP)
See F027	93-76-5	2,4,5-T
See F027	58-90-2	2,3,4,6-Tetrachlorophenol
See F027	95-95-4	2,4,5-Trichlorophenol
See F027	88-06-2	2,4,6-Trichlorophenol

R315-261-35. Lists of Hazardous Wastes - Deletion of Certain Hazardous Waste Codes Following Equipment Cleaning and Replacement.

(a) Wastes from wood preserving processes at plants that do not resume or initiate use of chlorophenolic preservatives will not meet the listing definition of F032 once the generator has met all of the requirements of Subsections R315-261-35(b) and (c). These wastes may, however, continue to meet another hazardous waste listing description or may exhibit one or more of the hazardous waste characteristics.

(b) Generators shall either clean or replace all process equipment that may have come into contact with chlorophenolic formulations or constituents thereof, including, but not limited

to, treatment cylinders, sumps, tanks, piping systems, drip pads, fork lifts, and trams, in a manner that minimizes or eliminates the escape of hazardous waste or constituents, leachate, contaminated drippage, or hazardous waste decomposition products to the ground water, surface water, or atmosphere.

(1) Generators shall do one of the following:

(i) Prepare and follow an equipment cleaning plan and clean equipment in accordance with Section R315-261-35;

(ii) Prepare and follow an equipment replacement plan and replace equipment in accordance with Section R315-261-35; or

(iii) Document cleaning and replacement in accordance with Section R315-261-35, carried out after termination of use of chlorophenolic preservatives.

(2) Cleaning Requirements.

(i) Prepare and sign a written equipment cleaning plan that describes:

- (A) The equipment to be cleaned;
- (B) How the equipment will be cleaned;
- (C) The solvent to be used in cleaning;
- (D) How solvent rinses will be tested; and
- (E) How cleaning residues will be disposed.

(ii) Equipment shall be cleaned as follows:

(A) Remove all visible residues from process equipment;

(B) Rinse process equipment with an appropriate solvent until dioxins and dibenzofurans are not detected in the final solvent rinse.

(iii) Analytical requirements.

(A) Rinses shall be tested by using an appropriate method.

(B) "Not detected" means at or below the following lower method calibration limits (MCLs): The 2,3,7,8-TCDD-based MCL-0.01 parts per trillion (ppt), sample weight of 1000 g, IS spiking level of 1 ppt, final extraction volume of 10-50 microliters. For other congeners-multiply the values by 1 for TCDF/PeCDF/PeCDD/PeCDF, by 2.5 for HxCDD/HxCDF/HpCDD/HpCDF, and by 5 for OCDD/OCDF.

(iv) The generator shall manage all residues from the cleaning process as F032 waste.

(3) Replacement requirements.

(i) Prepare and sign a written equipment replacement plan that describes:

- (A) The equipment to be replaced;
- (B) How the equipment will be replaced; and
- (C) How the equipment will be disposed.

(ii) The generator shall manage the discarded equipment as F032 waste.

(4) Documentation requirements.

(i) Document that previous equipment cleaning and/or replacement was performed in accordance with Section R315-261-35 and occurred after cessation of use of chlorophenolic preservatives.

(c) The generator shall maintain the following records documenting the cleaning and replacement as part of the facility's operating record:

- (1) The name and address of the facility;
- (2) Formulations previously used and the date on which their use ceased in each process at the plant;
- (3) Formulations currently used in each process at the plant;

(4) The equipment cleaning or replacement plan;

(5) The name and address of any persons who conducted the cleaning and replacement;

(6) The dates on which cleaning and replacement were accomplished;

(7) The dates of sampling and testing;

(8) A description of the sample handling and preparation techniques, including techniques used for extraction, containerization, preservation, and chain-of-custody of the samples;

(9) A description of the tests performed, the date the tests

were performed, and the results of the tests;

(10) The name and model numbers of the instrument(s) used in performing the tests;

(11) QA/QC documentation; and

(12) The following statement signed by the generator or his authorized representative: I certify under penalty of law that all process equipment required to be cleaned or replaced under Section R315-261-35 was cleaned or replaced as represented in the equipment cleaning and replacement plan and accompanying documentation. I am aware that there are significant penalties for providing false information, including the possibility of fine or imprisonment.

R315-261-39. Exclusions and Exemptions - Conditional Exclusion for Used, Broken Cathode Ray Tubes (CRTs) and Processed CRT Glass Undergoing Recycling.

Used, broken CRTs are not solid wastes if they meet the following conditions:

(a) Prior to processing: These materials are not solid wastes if they are destined for recycling and if they meet the following requirements:

(1) Storage. The broken CRTs shall be either:

(i) Stored in a building with a roof, floor, and walls, or

(ii) Placed in a container, i.e., a package or a vehicle, that is constructed, filled, and closed to minimize releases to the environment of CRT glass, including fine solid materials.

(2) Labeling. Each container in which the used, broken CRT is contained shall be labeled or marked clearly with one of the following phrases: "Used cathode ray tube(s)-contains leaded glass" or "Leaded glass from televisions or computers." It shall also be labeled: "Do not mix with other glass materials."

(3) Transportation. The used, broken CRTs shall be transported in a container meeting the requirements of Subsections R315-261-39(a)(1)(ii) and (2).

(4) Speculative accumulation and use constituting disposal. The used, broken CRTs are subject to the limitations on speculative accumulation as defined in Subsection R315-261-39(c)(8). If they are used in a manner constituting disposal, they shall comply with the applicable requirements of Sections R315-266-20 through 23 instead of the requirements of Section R315-261-39.

(5) Exports. In addition to the applicable conditions specified in Subsections R315-261-39(a)(1) through (4), exporters of used, broken CRTs shall comply with the following requirements:

(i) Notify EPA of an intended export before the CRTs are scheduled to leave the United States. A complete notification should be submitted sixty days before the initial shipment is intended to be shipped off-site. This notification may cover export activities extending over a twelve month or lesser period. The notification shall be in writing, signed by the exporter, and include the following information:

(A) Name, mailing address, telephone number and EPA ID number, if applicable, of the exporter of the CRTs.

(B) The estimated frequency or rate at which the CRTs are to be exported and the period of time over which they are to be exported.

(C) The estimated total quantity of CRTs specified in kilograms.

(D) All points of entry to and departure from each foreign country through which the CRTs will pass.

(E) A description of the means by which each shipment of the CRTs will be transported; e.g., mode of transportation vehicle, air, highway, rail, water, etc.; type(s) of container, drums, boxes, tanks, etc.

(F) The name and address of the recycler or recyclers and the estimated quantity of used CRTs to be sent to each facility, as well as the names of any alternate recyclers.

(G) A description of the manner in which the CRTs will be

recycled in the foreign country that will be receiving the CRTs.

(H) The name of any transit country through which the CRTs will be sent and a description of the approximate length of time the CRTs will remain in such country and the nature of their handling while there.

(ii) Notifications submitted by mail should be sent to the following mailing address: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division, (Mail Code 2254A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460. Hand-delivered notifications should be sent to: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division, (Mail Code 2254A), Environmental Protection Agency, Ariel Rios Bldg., Room 6144, 1200 Pennsylvania Ave., NW., Washington, DC. In both cases, the following shall be prominently displayed on the front of the envelope: "Attention: Notification of Intent to Export CRTs."

(iii) Upon request by EPA, the exporter shall furnish to EPA any additional information which a receiving country requests in order to respond to a notification.

(iv) EPA shall provide a complete notification to the receiving country and any transit countries. A notification is complete when EPA receives a notification which EPA determines satisfies the requirements of Subsection R315-261-39(a)(5)(i). Where a claim of confidentiality is asserted with respect to any notification information required by Subsection R315-261-39(a)(5)(i), EPA may find the notification not complete until any such claim is resolved in accordance with 40 CFR 260.2.

(v) The export of CRTs is prohibited unless the receiving country consents to the intended export. When the receiving country consents in writing to the receipt of the CRTs, EPA shall forward an Acknowledgment of Consent to Export CRTs to the exporter. Where the receiving country objects to receipt of the CRTs or withdraws a prior consent, EPA shall notify the exporter in writing. EPA shall also notify the exporter of any responses from transit countries.

(vi) When the conditions specified on the original notification change, the exporter shall provide EPA with a written renotification of the change, except for changes to the telephone number in Subsection R315-261-39(a)(5)(i)(A) and decreases in the quantity indicated pursuant to Subsection R315-261-39(a)(5)(i)(C). The shipment cannot take place until consent of the receiving country to the changes has been obtained, except for changes to information about points of entry and departure and transit countries pursuant to Subsections R315-261-39(a)(5)(i)(D) and (a)(5)(i)(H), and the exporter of CRTs receives from EPA a copy of the Acknowledgment of Consent to Export CRTs reflecting the receiving country's consent to the changes.

(vii) A copy of the Acknowledgment of Consent to Export CRTs shall accompany the shipment of CRTs. The shipment shall conform to the terms of the Acknowledgment.

(viii) If a shipment of CRTs cannot be delivered for any reason to the recycler or the alternate recycler, the exporter of CRTs shall renotify EPA of a change in the conditions of the original notification to allow shipment to a new recycler in accordance with Subsection R315-261-39(a)(5)(vi) and obtain another Acknowledgment of Consent to Export CRTs.

(ix) Exporters shall keep copies of notifications and Acknowledgments of Consent to Export CRTs for a period of three years following receipt of the Acknowledgment.

(x) CRT exporters shall file with EPA no later than March 1 of each year, an annual report summarizing the quantities, in kilograms; frequency of shipment; and ultimate destination(s), i.e., the facility or facilities where the recycling occurs, of all used CRTs exported during the previous calendar year. Such

reports shall also include the following:

(A) The name; EPA ID number, if applicable; and mailing and site address of the exporter;

(B) The calendar year covered by the report;

(C) A certification signed by the CRT exporter that states:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that, based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

(xi) Annual reports shall be submitted to the office specified in Subsection R315-261-39(a)(5)(ii). Exporters shall keep copies of each annual report for a period of at least three years from the due date of the report.

(b) Requirements for used CRT processing: Used, broken CRTs undergoing CRT processing as defined in Section R315-260-10 are not solid wastes if they meet the following requirements:

(1) Storage. Used, broken CRTs undergoing processing are subject to the requirement of Subsection R315-261-39(a)(4).

(2) Processing.

(i) All activities specified in Subsections R315-260-10(23)(ii) and (iii) shall be performed within a building with a roof, floor, and walls; and

(ii) No activities may be performed that use temperatures high enough to volatilize lead from CRTs.

(c) Processed CRT glass sent to CRT glass making or lead smelting: Glass from used CRTs that is destined for recycling at a CRT glass manufacturer or a lead smelter after processing is not a solid waste unless it is speculatively accumulated as defined in Subsection R315-261-1(c)(8).

(d) Use constituting disposal: Glass from used CRTs that is used in a manner constituting disposal shall comply with the requirements of Section R315-266-20 through 23 instead of the requirements of Section R315-261-39.

(x) CRT exporters shall file with EPA no later than March 1 of each year, an annual report summarizing the quantities, in kilograms; frequency of shipment; and ultimate destination(s), i.e., the facility or facilities where the recycling occurs, of all used CRTs exported during the previous calendar year. Such reports shall also include the following:

(A) The name, EPA ID number, if applicable, and mailing and site address of the exporter;

(B) The calendar year covered by the report;

(C) A certification signed by the CRT exporter that states:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that, based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

(xi) Annual reports shall be submitted to the office specified in Subsection R315-261-39(a)(5)(ii). Exporters shall keep copies of each annual report for a period of at least three years from the due date of the report.

R315-261-40. Exclusions and Exemptions - Conditional Exclusion for Used, Intact Cathode Ray Tubes (CRTs) Exported for Recycling.

Used, intact CRTs exported for recycling are not solid wastes if they meet the notice and consent conditions of Subsection R315-261-39(a)(5), and if they are not speculatively accumulated as defined in Subsection R315-261-1(c)(8).

R315-261-41. Exclusions and Exemptions - Notification and Recordkeeping for Used, Intact Cathode Ray Tubes (CRTs) Exported for Reuse.

(a) CRT exporters who export used, intact CRTs for reuse shall send a notification to EPA. This notification may cover export activities extending over a 12 month or lesser period.

(1) The notification shall be in writing, signed by the exporter, and include the following information:

(i) Name, mailing address, telephone number, and EPA ID number, if applicable, of the exporter of the used, intact CRTs;

(ii) The estimated frequency or rate at which the used, intact CRTs are to be exported for reuse and the period of time over which they are to be exported;

(iii) The estimated total quantity of used, intact CRTs specified in kilograms;

(iv) All points of entry to and departure from each transit country through which the used, intact CRTs will pass, a description of the approximate length of time the used, intact CRTs will remain in such country, and the nature of their handling while there;

(v) A description of the means by which each shipment of the used, intact CRTs will be transported; e.g., mode of transportation vehicle, air, highway, rail, water, etc.; type(s) of container, drums, boxes, tanks, etc.;

(vi) The name and address of the ultimate destination facility or facilities where the used, intact CRTs will be reused, refurbished, distributed, or sold for reuse and the estimated quantity of used, intact CRTs to be sent to each facility, as well as the name of any alternate destination facility or facilities;

(vii) A description of the manner in which the used, intact CRTs will be reused, including reuse after refurbishment, in the foreign country that will be receiving the used, intact CRTs; and

(viii) A certification signed by the CRT exporter that states: "I certify under penalty of law that the CRTs described in this notice are intact and fully functioning or capable of being functional after refurbishment and that the used CRTs will be reused or refurbished and reused. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

(2) Notifications submitted by mail should be sent to the following mailing address: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division, (Mail Code 2254A), Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460. Hand-delivered notifications should be sent to: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division, (Mail Code 2254A), Environmental Protection Agency, William Jefferson Clinton Building, Room 6144, 1200 Pennsylvania Ave. NW., Washington, DC 20004. In both cases, the following shall be prominently displayed on the front of the envelope: "Attention: Notification of Intent to Export CRTs."

(b) CRT exporters of used, intact CRTs sent for reuse shall keep copies of normal business records, such as contracts, demonstrating that each shipment of exported used, intact CRTs will be reused. This documentation shall be retained for a period of at least three years from the date the CRTs were exported. If the documents are written in a language other than English, CRT exporters of used, intact CRTs sent for reuse shall provide both the original, non-English version of the normal business records as well as a third-party translation of the normal business records into English within 30 days upon

request by EPA.

R315-261-140. Financial Requirements for Management of Excluded Hazardous Secondary Materials - Applicability.

(a) The requirements of Sections R315-261-140 through 143 and R315-261-147 through 151 and Appendix I to R315-261 apply to owners or operators of reclamation and intermediate facilities managing hazardous secondary materials excluded under Subsection R315-261-4(a)(24), except as provided otherwise in Subsection R315-261-140(b).

(b) States and the Federal government are exempt from the financial assurance requirements of Sections R315-261-140 through 143 and R315-261-147 through 151.

R315-261-141. Financial Requirements for Management of Excluded Hazardous Secondary Materials - Definitions of Terms as Used in Sections R315-261-140 Through 151.

The terms defined in 40 CFR 265.141(d), (f), (g), and (h), which are adopted by reference, have the same meaning as they do in 40 CFR 265.141, which is adopted by reference.

R315-261-142. Financial Requirements for Management of Excluded Hazardous Secondary Materials - Cost Estimate.

(a) The owner or operator shall have a detailed written estimate, in current dollars, of the cost of disposing of any hazardous secondary material as listed or characteristic hazardous waste, and the potential cost of closing the facility as a treatment, storage, and disposal facility.

(1) The estimate shall equal the cost of conducting the activities described in Subsection R315-261-142(a) at the point when the extent and manner of the facility's operation would make these activities the most expensive; and

(2) The cost estimate shall be based on the costs to the owner or operator of hiring a third party to conduct these activities. A third party is a party who is neither a parent nor a subsidiary of the owner or operator. See definition of parent corporation in 40 CFR 265.141(d), which is adopted by reference. The owner or operator may use costs for on-site disposal in accordance with applicable requirements if he can demonstrate that on-site disposal capacity will exist at all times over the life of the facility.

(3) The cost estimate may not incorporate any salvage value that may be realized with the sale of hazardous secondary materials, or hazardous or non-hazardous wastes if applicable under 40 CFR 265.113(d), which is adopted by reference; facility structures or equipment, land, or other assets associated with the facility.

(4) The owner or operator may not incorporate a zero cost for hazardous secondary materials, or hazardous or non-hazardous wastes if applicable under 40 CFR 265.113(d), which is adopted by reference, that might have economic value.

(b) During the active life of the facility, the owner or operator shall adjust the cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with Section R315-261-143. For owners and operators using the financial test or corporate guarantee, the cost estimate shall be updated for inflation within 30 days after the close of the firm's fiscal year and before submission of updated information to the Director as specified in Subsection R315-261-143(e)(3). The adjustment may be made by recalculating the cost estimate in current dollars, or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its Survey of Current Business, as specified in Subsections R315-261-142(b)(1) and (2). The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year.

(1) The first adjustment is made by multiplying the cost

estimate by the inflation factor. The result is the adjusted cost estimate.

(2) Subsequent adjustments are made by multiplying the latest adjusted cost estimate by the latest inflation factor.

(c) During the active life of the facility, the owner or operator shall revise the cost estimate no later than 30 days after a change in a facility's operating plan or design that would increase the costs of conducting the activities described in Subsection R315-261-142(a) or no later than 60 days after an unexpected event which increases the cost of conducting the activities described in Subsection R315-261-142(a). The revised cost estimate shall be adjusted for inflation as specified in Subsection R315-261-142(b).

(d) The owner or operator shall keep the following at the facility during the operating life of the facility: The latest cost estimate prepared in accordance with Subsections R315-261-142(a) and (c) and, when this estimate has been adjusted in accordance with Subsection R315-261-142(b), the latest adjusted cost estimate.

R315-261-143. Financial Requirements for Management of Excluded Hazardous Secondary Materials - Financial Assurance Condition.

As provided in Subsection R315-261-4(a)(24)(vi)(F), an owner or operator of a reclamation or intermediate facility shall have financial assurance as a condition of the exclusion as required under Subsection R315-261-4(a)(24). He shall choose from the options as specified in Subsections R315-261-143(a) through (e).

(a) Trust fund.

(1) An owner or operator may satisfy the requirements of Section R315-261-143 by establishing a trust fund which conforms to the requirements of Subsection R315-261-143(a) and submitting an originally signed duplicate of the trust agreement to the Director. The trustee shall be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(2) The wording of the trust agreement shall be identical to the wording specified in Subsection R315-261-151(a)(1), and the trust agreement shall be accompanied by a formal certification of acknowledgment, for example, see Subsection R315-261-151(a)(2). Schedule A of the trust agreement shall be updated within 60 days after a change in the amount of the current cost estimate covered by the agreement.

(3) The trust fund shall be funded for the full amount of the current cost estimate before it may be relied upon to satisfy the requirements of Section R315-261-143.

(4) Whenever the current cost estimate changes, the owner or operator shall compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator, within 60 days after the change in the cost estimate, shall either deposit an amount into the fund so that its value after this deposit at least equals the amount of the current cost estimate, or obtain other financial assurance as specified in Section R315-261-143 to cover the difference.

(5) If the value of the trust fund is greater than the total amount of the current cost estimate, the owner or operator may submit a written request to the Director for release of the amount in excess of the current cost estimate.

(6) If an owner or operator substitutes other financial assurance as specified in Section R315-261-143 for all or part of the trust fund, he may submit a written request to the Director for release of the amount in excess of the current cost estimate covered by the trust fund.

(7) Within 60 days after receiving a request from the owner or operator for release of funds as specified in Subsections R315-261-143(a)(5) or (6), the Director shall instruct the trustee to release to the owner or operator such

funds as the Director specifies in writing. If the owner or operator begins final closure under Sections R315-264-110 through 120 or 40 CFR 265.110 through 121, which is adopted by reference; an owner or operator may request reimbursements for partial or final closure expenditures by submitting itemized bills to the Director. The owner or operator may request reimbursements for partial closure only if sufficient funds are remaining in the trust fund to cover the maximum costs of closing the facility over its remaining operating life. No later than 60 days after receiving bills for partial or final closure activities, the Director shall instruct the trustee to make reimbursements in those amounts as the Director specifies in writing, if the Director determines that the partial or final closure expenditures are in accordance with the approved closure plan, or otherwise justified. If the Director has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly greater than the value of the trust fund, he may withhold reimbursements of such amounts as he deems prudent until he determines, in accordance with 40 CFR 265.143(i), which is adopted by reference, that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the Director does not instruct the trustee to make such reimbursements, he shall provide to the owner or operator a detailed written statement of reasons.

(8) The Director shall agree to termination of the trust when:

(i) An owner or operator substitutes alternate financial assurance as specified in Section R315-261-143; or

(ii) The Director releases the owner or operator from the requirements of Section R315-261-143 in accordance with Subsection R315-261-143(i).

(b) Surety bond guaranteeing payment into a trust fund.

(1) An owner or operator may satisfy the requirements of Section R315-261-143 by obtaining a surety bond which conforms to the requirements of Subsection R315-261-143(b) and submitting the bond to the Director. The surety company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

(2) The wording of the surety bond shall be identical to the wording specified in Subsection R315-261-151(b).

(3) The owner or operator who uses a surety bond to satisfy the requirements of Section R315-261-143 shall also establish a standby trust fund. Under the terms of the bond, all payments made thereunder shall be deposited by the surety directly into the standby trust fund in accordance with instructions from the Director. This standby trust fund shall meet the requirements specified in Subsection R315-261-143(a), except that:

(i) An originally signed duplicate of the trust agreement shall be submitted to the Director with the surety bond; and

(ii) Until the standby trust fund is funded pursuant to the requirements of Section R315-261-143, the following are not required by these regulations:

(A) Payments into the trust fund as specified in Subsection R315-261-143(a);

(B) Updating of Schedule A of the trust agreement, see Subsection R315-261-151(a), to show current cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The bond shall guarantee that the owner or operator shall:

(i) Fund the standby trust fund in an amount equal to the penal sum of the bond before loss of the exclusion under Subsection R315-261-4(a)(24) or

(ii) Fund the standby trust fund in an amount equal to the penal sum within 15 days after an administrative order to begin

closure issued by the Director becomes final, or within 15 days after an order to begin closure is issued by a U.S. district court or other court of competent jurisdiction; or

(iii) Provide alternate financial assurance as specified in Section R315-261-143, and obtain the Director's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and the Director of a notice of cancellation of the bond from the surety.

(5) Under the terms of the bond, the surety shall become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

(6) The penal sum of the bond shall be in an amount at least equal to the current cost estimate, except as provided in Subsection R315-261-143(f).

(7) Whenever the current cost estimate increases to an amount greater than the penal sum, the owner or operator, within 60 days after the increase, shall either cause the penal sum to be increased to an amount at least equal to the current cost estimate and submit evidence of such increase to the Director, or obtain other financial assurance as specified in Section R315-261-143 to cover the increase. Whenever the current cost estimate decreases, the penal sum may be reduced to the amount of the current cost estimate following written approval by the Director.

(8) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Director. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Director, as evidenced by the return receipts.

(9) The owner or operator may cancel the bond if the Director has given prior written consent based on his receipt of evidence of alternate financial assurance as specified in Section R315-261-143.

(c) Letter of credit.

(1) An owner or operator may satisfy the requirements of Section R315-261-143 by obtaining an irrevocable standby letter of credit which conforms to the requirements of Subsection R315-261-143(c) and submitting the letter to the Director. The issuing institution shall be an entity which has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a Federal or State agency.

(2) The wording of the letter of credit shall be identical to the wording specified in Subsection R315-261-151(c).

(3) An owner or operator who uses a letter of credit to satisfy the requirements of Section R315-261-143 shall also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the Director shall be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the Director. This standby trust fund shall meet the requirements of the trust fund specified in Subsection R315-261-143(a), except that:

(i) An originally signed duplicate of the trust agreement shall be submitted to the Director with the letter of credit; and

(ii) Unless the standby trust fund is funded pursuant to the requirements of Section R315-261-143, the following are not required by these regulations:

(A) Payments into the trust fund as specified in Subsection R315-261-143(a);

(B) Updating of Schedule A of the trust agreement, see Subsection R315-261-151(a), to show current cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The letter of credit shall be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the

following information: The EPA Identification Number, if any issued; name; and address of the facility; and the amount of funds assured for the facility by the letter of credit.

(5) The letter of credit shall be irrevocable and issued for a period of at least 1 year. The letter of credit shall provide that the expiration date shall be automatically extended for a period of at least 1 year unless, at least 120 days before the current expiration date, the issuing institution notifies both the owner or operator and the Director by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days will begin on the date when both the owner or operator and the Director have received the notice, as evidenced by the return receipts.

(6) The letter of credit shall be issued in an amount at least equal to the current cost estimate, except as provided in Subsection R315-261-143(f).

(7) Whenever the current cost estimate increases to an amount greater than the amount of the credit, the owner or operator, within 60 days after the increase, shall either cause the amount of the credit to be increased so that it at least equals the current cost estimate and submit evidence of such increase to the Director, or obtain other financial assurance as specified in Section R315-261-143 to cover the increase. Whenever the current cost estimate decreases, the amount of the credit may be reduced to the amount of the current cost estimate following written approval by the Director.

(8) Following a determination by the Director that the hazardous secondary materials do not meet the conditions of the exclusion under Subsection R315-261-4(a)(24), the Director may draw on the letter of credit.

(9) If the owner or operator does not establish alternate financial assurance as specified in Section R315-261-143 and obtain written approval of such alternate assurance from the Director within 90 days after receipt by both the owner or operator and the Director of a notice from the issuing institution that it has decided not to extend the letter of credit beyond the current expiration date, the Director shall draw on the letter of credit. The Director may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last 30 days of any such extension the Director shall draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in Section R315-261-143 and obtain written approval of such assurance from the Director.

(10) The Director shall return the letter of credit to the issuing institution for termination when:

(i) An owner or operator substitutes alternate financial assurance as specified in Section R315-261-143; or

(ii) The Director releases the owner or operator from the requirements of Section R315-261-143 in accordance with Subsection R315-261-143(i).

(d) Insurance.

(1) An owner or operator may satisfy the requirements of Section R315-261-143 by obtaining insurance which conforms to the requirements of Subsection R315-261-143(d) and submitting a certificate of such insurance to the Director. At a minimum, the insurer shall be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in Utah. (2) The wording of the certificate of insurance shall be identical to the wording specified in Subsection R315-261-151(d).

(3) The insurance policy shall be issued for a face amount at least equal to the current cost estimate, except as provided in subsection R315-261-143(f). The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability shall be lowered by the amount of the payments.

(4) The insurance policy shall guarantee that funds shall be

available whenever needed to pay the cost of removal of all hazardous secondary materials from the unit, to pay the cost of decontamination of the unit, to pay the costs of the performance of activities required under Sections R315-264-110 through 120 or 40 CFR 265.110 through 121, which is adopted by reference; as applicable, for the facilities covered by this policy. The policy shall also guarantee that once funds are needed, the insurer shall be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the Director, to such party or parties as the Director specifies.

(5) After beginning partial or final closure under Rules R315-264 or 265, as applicable, an owner or operator or any other authorized person may request reimbursements for closure expenditures by submitting itemized bills to the Director. The owner or operator may request reimbursements only if the remaining value of the policy is sufficient to cover the maximum costs of closing the facility over its remaining operating life. Within 60 days after receiving bills for closure activities, the Director shall instruct the insurer to make reimbursements in such amounts as the Director specifies in writing if the Director determines that the expenditures are in accordance with the approved plan or otherwise justified. If the Director has reason to believe that the maximum cost over the remaining life of the facility will be significantly greater than the face amount of the policy, he may withhold reimbursement of such amounts as he deems prudent until he determines, in accordance with Subsection R315-261-143(h), that the owner or operator is no longer required to maintain financial assurance for the particular facility. If the Director does not instruct the insurer to make such reimbursements, he shall provide to the owner or operator a detailed written statement of reasons.

(6) The owner or operator shall maintain the policy in full force and effect until the Director consents to termination of the policy by the owner or operator as specified in Subsection R315-261-143(i)(10). Failure to pay the premium, without substitution of alternate financial assurance as specified in Section R315-261-143, shall constitute a significant violation of these regulations warranting such remedy as the Director deems necessary. Such violation shall be deemed to begin upon receipt by the Director of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration.

(7) Each policy shall contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.

(8) The policy shall provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy shall, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the Director. Cancellation, termination, or failure to renew may not occur, however, during the 120 days beginning with the date of receipt of the notice by both the Director and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy shall remain in full force and effect in the event that on or before the date of expiration:

(i) The Director deems the facility abandoned; or
(ii) Conditional exclusion or interim status is lost, terminated, or revoked; or

(iii) Closure is ordered by the Director or a U.S. district court or other court of competent jurisdiction; or

(iv) The owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or

(v) The premium due is paid.

(9) Whenever the current cost estimate increases to an amount greater than the face amount of the policy, the owner or operator, within 60 days after the increase, shall either cause the face amount to be increased to an amount at least equal to the current cost estimate and submit evidence of such increase to the Director, or obtain other financial assurance as specified in Section R315-261-143 to cover the increase. Whenever the current cost estimate decreases, the face amount may be reduced to the amount of the current cost estimate following written approval by the Director.

(10) The Director shall give written consent to the owner or operator that he may terminate the insurance policy when:

(i) An owner or operator substitutes alternate financial assurance as specified in Section R315-261-143; or

(ii) The Director releases the owner or operator from the requirements of Section R315-261-143 in accordance with Subsection R315-261-143(i).

(e) Financial test and corporate guarantee.

(1) An owner or operator may satisfy the requirements of Section R315-261-143 by demonstrating that he passes a financial test as specified in Subsection R315-261-143(e). To pass this test the owner or operator shall meet the criteria of either Subsections R315-261-143(e)(1)(i) or (ii):

(i) The owner or operator shall have:

(A) Two of the following three ratios: A ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and

(B) Net working capital and tangible net worth each at least six times the sum of the current cost estimates and the current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least \$10 million; and

(D) Assets located in the United States amounting to at least 90 percent of total assets or at least six times the sum of the current cost estimates and the current plugging and abandonment cost estimates.

(ii) The owner or operator shall have:

(A) A current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's; and

(B) Tangible net worth at least six times the sum of the current cost estimates and the current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least \$10 million; and

(D) Assets located in the United States amounting to at least 90 percent of total assets or at least six times the sum of the current cost estimates and the current plugging and abandonment cost estimates.

(2) The phrase "current cost estimates" as used in Subsection R315-261-143(e)(1) refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer, Subsection R315-261-151(e). The phrase "current plugging and abandonment cost estimates" as used in Subsection R315-261-143(e)(1) refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer, 40 CFR 144.70(f).

(3) To demonstrate that he meets this test, the owner or operator shall submit the following items to the Director:

(i) A letter signed by the owner's or operator's chief financial officer and worded as specified in Subsection R315-261-151(e); and

(ii) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

(iii) If the chief financial officer's letter providing evidence of financial assurance includes financial data showing that the owner or operator satisfies Subsection R315-261-143(e)(1)(i)

that are different from the data in the audited financial statements referred to in Subsection R315-261-143(e)(3)(ii) or any other audited financial statement or data filed with the SEC, then a special report from the owner's or operator's independent certified public accountant to the owner or operator is required. The special report shall be based upon an agreed upon procedures engagement in accordance with professional auditing standards and shall describe the procedures performed in comparing the data in the chief financial officer's letter derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements, the findings of the comparison, and the reasons for any differences.

(4) The owner or operator may obtain an extension of the time allowed for submission of the documents specified in Subsection R315-261-143(e)(3) if the fiscal year of the owner or operator ends during the 90 days prior to the effective date of these regulations and if the year-end financial statements for that fiscal year shall be audited by an independent certified public accountant. The extension shall end no later than 90 days after the end of the owner's or operator's fiscal year. To obtain the extension, the owner's or operator's chief financial officer shall send, by the effective date of these regulations, a letter to the Director. This letter from the chief financial officer shall:

(i) Request the extension;

(ii) Certify that he has grounds to believe that the owner or operator meets the criteria of the financial test;

(iii) Specify for each facility to be covered by the test the EPA Identification Number, if any are issued; name; address; and current cost estimates to be covered by the test;

(iv) Specify the date ending the owner's or operator's last complete fiscal year before the effective date of Sections R315-261-140 through 143 and R315-261-147 through 151;

(v) Specify the date, no later than 90 days after the end of such fiscal year, when he shall submit the documents specified in Subsection R315-261-143 (e)(3); and

(vi) Certify that the year-end financial statements of the owner or operator for such fiscal year shall be audited by an independent certified public accountant.

(5) After the initial submission of items specified in Subsection R315-261-143(e)(3), the owner or operator shall send updated information to the Director within 90 days after the close of each succeeding fiscal year. This information shall consist of all three items specified in Subsection R315-261-143(e)(3).

(6) If the owner or operator no longer meets the requirements of Subsection R315-261-143(e)(1), he shall send notice to the Director of intent to establish alternate financial assurance as specified in Section R315-261-143. The notice shall be sent by certified mail within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator shall provide the alternate financial assurance within 120 days after the end of such fiscal year.

(7) The Director may, based on a reasonable belief that the owner or operator may no longer meet the requirements of Subsection R315-261-143(e)(1), require reports of financial condition at any time from the owner or operator in addition to those specified in Subsection R315-261-143(e)(3). If the Director finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of Subsection R315-261-143(e)(1), the owner or operator shall provide alternate financial assurance as specified in Section R315-261-143 within 30 days after notification of such a finding.

(8) The Director may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements, see Subsection R315-

261-143(e)(3)(ii). An adverse opinion or a disclaimer of opinion shall be cause for disallowance. The Director shall evaluate other qualifications on an individual basis. The owner or operator shall provide alternate financial assurance as specified in Section R315-261-143 within 30 days after notification of the disallowance.

(9) The owner or operator is no longer required to submit the items specified in Subsection R315-261-143(e)(3) when:

(i) An owner or operator substitutes alternate financial assurance as specified in Section R315-261-143; or

(ii) The Director releases the owner or operator from the requirements of Section R315-261-143 in accordance with Subsection R315-261-143(i).

(10) An owner or operator may meet the requirements of Section R315-261-143 by obtaining a written guarantee. The guarantor shall be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor shall meet the requirements for owners or operators in Subsections R315-261-143(e)(1) through (8) and shall comply with the terms of the guarantee. The wording of the guarantee shall be identical to the wording specified in Subsection R315-261-151(g)(1). A certified copy of the guarantee shall accompany the items sent to the Director as specified in Subsection R315-261-143(e)(3). One of these items shall be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter shall describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter shall describe this "substantial business relationship" and the value received in consideration of the guarantee. The terms of the guarantee shall provide that:

(i) Following a determination by the Director that the hazardous secondary materials at the owner or operator's facility covered by this guarantee do not meet the conditions of the exclusion under Subsection R315-261-4(a)(24), the guarantor shall dispose of any hazardous secondary material as hazardous waste and close the facility in accordance with closure requirements found in Rules R315-264 or 265, as applicable, or establish a trust fund as specified in Subsection R315-261-143(a) in the name of the owner or operator in the amount of the current cost estimate.

(ii) The corporate guarantee shall remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the Director. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Director, as evidenced by the return receipts.

(iii) If the owner or operator fails to provide alternate financial assurance as specified in Section R315-261-143 and obtain the written approval of such alternate assurance from the Director within 90 days after receipt by both the owner or operator and the Director of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor shall provide such alternate financial assurance in the name of the owner or operator.

(f) Use of multiple financial mechanisms. An owner or operator may satisfy the requirements of Section R315-261-143 by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds, letters of credit, and insurance. The mechanisms shall be as specified in Subsection R315-261-143(a) through (d), except that it is the combination of mechanisms, rather than the single mechanism, which shall provide financial assurance for an amount at least equal to the current cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, he may use the trust fund as the standby trust

fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The Director may use any or all of the mechanisms to provide for the facility.

(g) Use of a financial mechanism for multiple facilities. An owner or operator may use a financial assurance mechanism specified in Section R315-261-143 to meet the requirements of Section R315-261-143 for more than one facility. Evidence of financial assurance submitted to the Director shall include a list showing, for each facility, the EPA Identification Number, if any issued; name; address; and the amount of funds assured by the mechanism. In directing funds available through the mechanism for any of the facilities covered by the mechanism, the Director may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

(h) Removal and Decontamination Plan for Release

(1) An owner or operator of a reclamation facility or an intermediate facility who wishes to be released from his financial assurance obligations under Subsection R315-261-4(a)(24)(vi)(F) shall submit a plan for removing all hazardous secondary material residues to the Director at least 180 days prior to the date on which he expects to cease to operate under the exclusion.

(2) The plan shall include, at least:

(A) For each hazardous secondary materials storage unit subject to financial assurance requirements under Subsection R315-261-4(a)(24)(vi)(F), a description of how all excluded hazardous secondary materials shall be recycled or sent for recycling, and how all residues, contaminated containment systems, liners, etc; contaminated soils; subsoils; structures; and equipment shall be removed or decontaminated as necessary to protect human health and the environment, and

(B) A detailed description of the steps necessary to remove or decontaminate all hazardous secondary material residues and contaminated containment system components, equipment, structures, and soils including, but not limited to, procedures for cleaning equipment and removing contaminated soils, methods for sampling and testing surrounding soils, and criteria for determining the extent of decontamination necessary to protect human health and the environment; and

(C) A detailed description of any other activities necessary to protect human health and the environment during this timeframe, including, but not limited to, leachate collection, run-on and run-off control, etc; and

(D) A schedule for conducting the activities described which, at a minimum, includes the total time required to remove all excluded hazardous secondary materials for recycling and decontaminate all units subject to financial assurance under Subsection R315-261-4(a)(24)(vi)(F) and the time required for intervening activities which will allow tracking of the progress of decontamination.

(3) The Director shall provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments on the plan and request modifications to the plan no later than 30 days from the date of the notice. He shall also, in response to a request or at his discretion, hold a public hearing whenever such a hearing might clarify one or more issues concerning the plan. The Director shall give public notice of the hearing at least 30 days before it occurs. Public notice of the hearing may be given at the same time as notice of the opportunity for the public to submit written comments, and the two notices may be combined. The Director shall approve, modify, or disapprove the plan within 90 days of its receipt. If the Director does not approve the plan, he shall provide the owner or operator with a detailed written statement of reasons for the refusal and the owner or operator shall modify the plan or submit a new plan for approval within 30 days after receiving such written statement. The Director shall approve or modify this plan in writing within 60 days. If the Director modifies the

plan, this modified plan becomes the approved plan. The Director shall assure that the approved plan is consistent with Subsection R315-261-143(h). A copy of the modified plan with a detailed statement of reasons for the modifications shall be mailed to the owner or operator.

(4) Within 60 days of completion of the activities described for each hazardous secondary materials management unit, the owner or operator shall submit to the Director, by registered mail, a certification that all hazardous secondary materials have been removed from the unit and the unit has been decontaminated in accordance with the specifications in the approved plan. The certification shall be signed by the owner or operator and by a qualified Professional Engineer. Documentation supporting the Professional Engineer's certification shall be furnished to the Director, upon request, until he releases the owner or operator from the financial assurance requirements for Subsection R315-261-4(a)(24)(vi)(F).

(i) Release of the owner or operator from the requirements of Section R315-261-143. Within 60 days after receiving certifications from the owner or operator and a qualified Professional Engineer that all hazardous secondary materials have been removed from the facility or a unit at the facility and the facility or a unit has been decontaminated in accordance with the approved plan as required in Subsection R315-261-143(h), the Director shall notify the owner or operator in writing that he is no longer required under Subsection R315-261-4(a)(24)(vi)(F) to maintain financial assurance for that facility or a unit at the facility, unless the Director has reason to believe that all hazardous secondary materials have not been removed from the facility or unit at a facility or that the facility or unit has not been decontaminated in accordance with the approved plan. The Director shall provide the owner or operator a detailed written statement of any such reason to believe that all hazardous secondary materials have not been removed from the unit or that the unit has not been decontaminated in accordance with the approved plan.

R315-261-147. Financial Requirements for Management of Excluded Hazardous Secondary Materials - Liability Requirements.

(a) Coverage for sudden accidental occurrences. An owner or operator of a hazardous secondary material reclamation facility or an intermediate facility subject to financial assurance requirements under Subsection R315-261-4(a)(24)(vi)(F), or a group of such facilities, shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator shall have and maintain liability coverage for sudden accidental occurrences in the amount of at least \$1 million per occurrence with an annual aggregate of at least \$2 million, exclusive of legal defense costs. This liability coverage may be demonstrated as specified in Subsections R315-261-147(a)(1), (2), (3), (4), (5), or (6):

(1) An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in Subsection R315-261-147(a).

(i) Each insurance policy shall be amended by attachment of the Hazardous Secondary Material Facility Liability Endorsement, or evidenced by a Certificate of Liability Insurance. The wording of the endorsement shall be identical to the wording specified in Subsection R315-261-151(h). The wording of the certificate of insurance shall be identical to the wording specified in Subsection R315-261-151(i). The owner or operator shall submit a signed duplicate original of the endorsement or the certificate of insurance to the Director. If requested by a Director, the owner or operator shall provide a signed duplicate original of the insurance policy.

(ii) Each insurance policy shall be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer in Utah.

(2) An owner or operator may meet the requirements of Section R315-261-147 by passing a financial test or using the guarantee for liability coverage as specified in Subsections R315-261-147(f) and (g).

(3) An owner or operator may meet the requirements of Subsection R315-261-147 by obtaining a letter of credit for liability coverage as specified in Subsection R315-261-147(h).

(4) An owner or operator may meet the requirements of Subsection R315-261-147 by obtaining a surety bond for liability coverage as specified in Subsection R315-261-147(i).

(5) An owner or operator may meet the requirements of Subsection R315-261-147 by obtaining a trust fund for liability coverage as specified in Subsection R315-261-147(j).

(6) An owner or operator may demonstrate the required liability coverage through the use of combinations of insurance, financial test, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated shall total at least the minimum amounts required by Subsection R315-261-147. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under this paragraph, the owner or operator shall specify at least one such assurance as "primary" coverage and shall specify other assurance as "excess" coverage.

(7) An owner or operator shall notify the Director in writing within 30 days whenever:

(i) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in Subsections R315-261-147(a)(1) through (a)(6); or

(ii) A Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous secondary material reclamation facility or intermediate facility is entered between the owner or operator and third-party claimant for liability coverage under Subsections R315-261-147(a)(1) through (a)(6); or

(iii) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous secondary material reclamation facility or intermediate facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under Subsections R315-261-147(a)(1) through (a)(6).

(b) Coverage for nonsudden accidental occurrences. An owner or operator of a hazardous secondary material reclamation facility or intermediate facility with land-based units, as defined in Section R315-260-10, which are used to manage hazardous secondary materials excluded under Subsection R315-261-4(a)(24) or a group of such facilities, shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by nonsudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator shall have and maintain liability coverage for nonsudden accidental occurrences in the amount of at least \$3 million per occurrence with an annual aggregate of at least \$6 million, exclusive of legal defense costs. An owner or operator who shall meet the requirements of Section R315-261-147 may combine the required per-occurrence coverage levels for sudden and nonsudden accidental occurrences into a single per-occurrence level, and combine the required annual aggregate coverage

levels for sudden and nonsudden accidental occurrences into a single annual aggregate level. Owners or operators who combine coverage levels for sudden and nonsudden accidental occurrences shall maintain liability coverage in the amount of at least \$4 million per occurrence and \$8 million annual aggregate. This liability coverage may be demonstrated as specified in Subsections R315-261-147(b)(1), (2), (3), (4), (5), or (6):

(1) An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in Subsection R315-261-147.

(i) Each insurance policy shall be amended by attachment of the Hazardous Secondary Material Facility Liability Endorsement or evidenced by a Certificate of Liability Insurance. The wording of the endorsement shall be identical to the wording specified in Subsection R315-261-151(h). The wording of the certificate of insurance shall be identical to the wording specified in Subsection R315-261-151(i). The owner or operator shall submit a signed duplicate original of the endorsement or the certificate of insurance to the Director.

(ii) Each insurance policy shall be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer in Utah.

(2) An owner or operator may meet the requirements of Section R315-261-147 by passing a financial test or using the guarantee for liability coverage as specified in Subsections R315-261-147(f) and (g).

(3) An owner or operator may meet the requirements of Subsection R315-261-147 by obtaining a letter of credit for liability coverage as specified in Subsection R315-261-147(h).

(4) An owner or operator may meet the requirements of Section R315-261-147 by obtaining a surety bond for liability coverage as specified in Subsection R315-261-147(i).

(5) An owner or operator may meet the requirements of Subsection R315-261-147 by obtaining a trust fund for liability coverage as specified in Subsection R315-261-147(j).

(6) An owner or operator may demonstrate the required liability coverage through the use of combinations of insurance, financial test, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated shall total at least the minimum amounts required by Section R315-261-147. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under Subsection R315-261-147(b), the owner or operator shall specify at least one such assurance as "primary" coverage and shall specify other assurance as "excess" coverage.

(7) An owner or operator shall notify the Director in writing within 30 days whenever:

(i) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in Subsections R315-261-147(b)(1) through (b)(6); or

(ii) A Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous secondary material treatment and/or storage facility is entered between the owner or operator and third-party claimant for liability coverage under Subsection R315-261-147(b)(1) through (b)(6); or

(iii) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous secondary material treatment and/or storage facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under Subsections R315-261-147(b)(1) through (b)(6).

(c) Request for variance. If an owner or operator can demonstrate to the satisfaction of the Director that the levels of financial responsibility required by Subsection R315-261-147(a) or (b) are not consistent with the degree and duration of risk associated with treatment and/or storage at the facility or group of facilities, the owner or operator may obtain a variance from the Director. The request for a variance shall be submitted in writing to the Director. If granted, the variance shall take the form of an adjusted level of required liability coverage, such level to be based on the Director's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. The Director may require an owner or operator who requests a variance to provide such technical and engineering information as is deemed necessary by the Director to determine a level of financial responsibility other than that required by Subsection R315-261-147(a) or (b).

(d) Adjustments by the Director. If the Director determines that the levels of financial responsibility required by Subsections R315-261-147(a) or (b) are not consistent with the degree and duration of risk associated with treatment and/or storage at the facility or group of facilities, the Director may adjust the level of financial responsibility required under Subsections R315-261-147(a) or (b) as may be necessary to protect human health and the environment. This adjusted level shall be based on the Director's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. In addition, if the Director determines that there is a significant risk to human health and the environment from nonsudden accidental occurrences resulting from the operations of a facility that is not a surface impoundment, pile, or land treatment facility, he may require that an owner or operator of the facility comply with Subsection R315-261-147(b). An owner or operator shall furnish to the Director, within a reasonable time, any information which the Director requests to determine whether cause exists for such adjustments of level or type of coverage.

(e) Period of coverage. Within 60 days after receiving certifications from the owner or operator and a qualified Professional Engineer that all hazardous secondary materials have been removed from the facility or a unit at the facility and the facility or a unit has been decontaminated in accordance with the approved plan per Subsection R315-261-143(h), the Director shall notify the owner or operator in writing that he is no longer required under Subsection R315-261-4(a)(24)(vi)(F) to maintain liability coverage for that facility or a unit at the facility, unless the Director has reason to believe that all hazardous secondary materials have not been removed from the facility or unit at a facility or that the facility or unit has not been decontaminated in accordance with the approved plan.

(f) Financial test for liability coverage.

(1) An owner or operator may satisfy the requirements of Section R315-261-147 by demonstrating that he passes a financial test as specified in this paragraph. To pass this test the owner or operator shall meet the criteria of Subsections R315-261-147(f)(1)(i) or (ii):

(i) The owner or operator shall have:

(A) Net working capital and tangible net worth each at least six times the amount of liability coverage to be demonstrated by this test; and

(B) Tangible net worth of at least \$10 million; and

(C) Assets in the United States amounting to either:

(I) At least 90 percent of his total assets; or

(II) at least six times the amount of liability coverage to be demonstrated by this test.

(ii) The owner or operator shall have:

(A) A current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's, or Aaa, Aa, A, or Baa as issued by Moody's; and

(B) Tangible net worth of at least \$10 million; and

(C) Tangible net worth at least six times the amount of liability coverage to be demonstrated by this test; and

(D) Assets in the United States amounting to either:

(I) At least 90 percent of his total assets; or

(II) at least six times the amount of liability coverage to be demonstrated by this test.

(2) The phrase "amount of liability coverage" as used in Subsection R315-261-147(f)(1) refers to the annual aggregate amounts for which coverage is required under Subsections R315-261-147(a) and (b) and the annual aggregate amounts for which coverage is required under Subsections R315-264-147(a) and (b) and 40 CFR 265.147(a) and (b), which are adopted by reference.

(3) To demonstrate that he meets this test, the owner or operator shall submit the following three items to the Director:

(i) A letter signed by the owner's or operator's chief financial officer and worded as specified in Subsection R315-261-151(f). If an owner or operator is using the financial test to demonstrate both assurance as specified by Subsection R315-261-143(e), and liability coverage, he shall submit the letter specified in Subsection R315-261-151(f) to cover both forms of financial responsibility; a separate letter as specified in Subsection R315-261-151(e) is not required.

(ii) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year.

(iii) If the chief financial officer's letter providing evidence of financial assurance includes financial data showing that the owner or operator satisfies Subsection R315-261-147(f)(1)(i) that are different from the data in the audited financial statements referred to in Subsection R315-261-147(f)(3)(ii) or any other audited financial statement or data filed with the SEC, then a special report from the owner's or operator's independent certified public accountant to the owner or operator is required. The special report shall be based upon an agreed upon procedures engagement in accordance with professional auditing standards and shall describe the procedures performed in comparing the data in the chief financial officer's letter derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements, the findings of the comparison, and the reasons for any difference.

(4) The owner or operator may obtain a one-time extension of the time allowed for submission of the documents specified in Subsection R315-261-147(f)(3) if the fiscal year of the owner or operator ends during the 90 days prior to the effective date of these regulations and if the year-end financial statements for that fiscal year shall be audited by an independent certified public accountant. The extension shall end no later than 90 days after the end of the owner's or operator's fiscal year. To obtain the extension, the owner's or operator's chief financial officer shall send, by the effective date of these regulations, a letter to the Director. This letter from the chief financial officer shall:

(i) Request the extension;

(ii) Certify that he has grounds to believe that the owner or operator meets the criteria of the financial test;

(iii) Specify for each facility to be covered by the test the EPA Identification Number, name, address, the amount of liability coverage and, when applicable, current closure and post-closure cost estimates to be covered by the test;

(iv) Specify the date ending the owner's or operator's last complete fiscal year before the effective date of these regulations;

(v) Specify the date, no later than 90 days after the end of such fiscal year, when he will submit the documents specified in Subsection R315-261-147(f)(3); and

(vi) Certify that the year-end financial statements of the owner or operator for such fiscal year will be audited by an independent certified public accountant.

(5) After the initial submission of items specified in Subsection R315-261-147(f)(3), the owner or operator shall send updated information to the Director within 90 days after the close of each succeeding fiscal year. This information shall consist of all three items specified in Subsection R315-261-147(f)(3).

(6) If the owner or operator no longer meets the requirements of Subsection R315-261-147(f)(1), he shall obtain insurance, a letter of credit, a surety bond, a trust fund, or a guarantee for the entire amount of required liability coverage as specified in Section R315-261-147. Evidence of liability coverage shall be submitted to the Director within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the test requirements.

(7) The Director may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements, see Subsection R315-261-147(f)(3)(ii). An adverse opinion or a disclaimer of opinion shall be cause for disallowance. The Director shall evaluate other qualifications on an individual basis. The owner or operator shall provide evidence of insurance for the entire amount of required liability coverage as specified in Section R315-261-147 within 30 days after notification of disallowance.

(g) Guarantee for liability coverage.

(1) Subject to Subsection R315-261-147(g)(2), an owner or operator may meet the requirements of Section R315-261-147 by obtaining a written guarantee, hereinafter referred to as "guarantee." The guarantor shall be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor shall meet the requirements for owners or operators in Subsection R315-261-147(f)(1) through (f)(6). The wording of the guarantee shall be identical to the wording specified in Subsection R315-261-151(g)(2). A certified copy of the guarantee shall accompany the items sent to the Director as specified in Subsection R315-261-147(f)(3). One of these items shall be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, this letter shall describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter shall describe this "substantial business relationship" and the value received in consideration of the guarantee.

(i) If the owner or operator fails to satisfy a judgment based on a determination of liability for bodily injury or property damage to third parties caused by sudden or nonsudden accidental occurrences, or both as the case may be, arising from the operation of facilities covered by this corporate guarantee, or fails to pay an amount agreed to in settlement of claims arising from or alleged to arise from such injury or damage, the guarantor shall do so up to the limits of coverage.

(2)(i) In the case of corporations incorporated outside the United States, a guarantee may be used to satisfy the requirements of Section R315-261-147 only if the non-U.S. corporation has identified a registered agent for service of process in Utah.

(h) Letter of credit for liability coverage.

(1) An owner or operator may satisfy the requirements of Section R315-261-147 by obtaining an irrevocable standby letter of credit that conforms to the requirements of Subsection R315-261-147(h) and submits a copy of the letter of credit to the Director.

(2) The financial institution issuing the letter of credit shall be an entity that has the authority to issue letters of credit and whose letter of credit operations are regulated and examined

by a Federal or Utah agency.

(3) The wording of the letter of credit shall be identical to the wording specified in Subsection R315-261-151(j).

(4) An owner or operator who uses a letter of credit to satisfy the requirements of Section R315-261-147 may also establish a standby trust fund. Under the terms of such a letter of credit, all amounts paid pursuant to a draft by the trustee of the standby trust shall be deposited by the issuing institution into the standby trust in accordance with instructions from the trustee. The trustee of the standby trust fund shall be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or Utah agency.

(5) The wording of the standby trust fund shall be identical to the wording specified in Subsection R315-261-151(m).

(i) Surety bond for liability coverage.

(1) An owner or operator may satisfy the requirements of Section R315-261-147 by obtaining a surety bond that conforms to the requirements of Subsection R315-261-147(i) and submitting a copy of the bond to the Director.

(2) The surety company issuing the bond shall be among those listed as acceptable sureties on Federal bonds in the most recent Circular 570 of the U.S. Department of the Treasury.

(3) The wording of the surety bond shall be identical to the wording specified in Subsection R315-261-151(k).

(j) Trust fund for liability coverage.

(1) An owner or operator may satisfy the requirements of Section R315-261-147 by establishing a trust fund that conforms to the requirements of Subsection R315-261-147(j) and submitting an originally signed duplicate of the trust agreement to the Director.

(2) The trustee shall be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or Utah agency.

(3) The trust fund for liability coverage shall be funded for the full amount of the liability coverage to be provided by the trust fund before it may be relied upon to satisfy the requirements of Section R315-261-147. If at any time after the trust fund is created the amount of funds in the trust fund is reduced below the full amount of the liability coverage to be provided, the owner or operator, by the anniversary date of the establishment of the Fund, shall either add sufficient funds to the trust fund to cause its value to equal the full amount of liability coverage to be provided, or obtain other financial assurance as specified in Section R315-261-147 to cover the difference. For purposes of Subsection R315-261-147(j), "the full amount of the liability coverage to be provided" means the amount of coverage for sudden and/or nonsudden occurrences required to be provided by the owner or operator by Section R315-261-147, less the amount of financial assurance for liability coverage that is being provided by other financial assurance mechanisms being used to demonstrate financial assurance by the owner or operator.

(4) The wording of the trust fund shall be identical to the wording specified in Subsection R315-261-151(l).

R315-261-148. Financial Requirements for Management of Excluded Hazardous Secondary Materials - Incapacity of Owners or Operators, Guarantors, or Financial Institutions.

(a) An owner or operator shall notify the Director by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the owner or operator as debtor, within 10 days after commencement of the proceeding. A guarantor of a corporate guarantee as specified in Subsection R315-261-143(e) shall make such a notification if he is named as debtor, as required under the terms of the corporate guarantee.

(b) An owner or operator who fulfills the requirements of Sections R315-261-143 or R315-261-147 by obtaining a trust

fund, surety bond, letter of credit, or insurance policy shall be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee or of the institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments. The owner or operator shall establish other financial assurance or liability coverage within 60 days after such an event.

R315-261-151. Financial Requirements for Management of Excluded Hazardous Secondary Materials - Wording of the Instruments.

(a)(1) A trust agreement for a trust fund, as specified in Subsection R315-261-143(a) shall be worded as follows, except that instructions in parentheses are to be replaced with the relevant information and the parentheses deleted:

Trust Agreement

Trust Agreement, the "Agreement," entered into as of (date) by and between (name of the owner or operator), a (name of State) (insert "corporation," "partnership," "association," or "proprietorship"), the "Grantor," and (name of corporate trustee), (insert "incorporated in the State of _____" or "a national bank"), the "Trustee."

Whereas, the Utah Waste Management and Radiation Control Board of the State of Utah, (the "BOARD") has established certain regulations applicable to the Grantor, requiring that an owner or operator of a facility regulated under Rules R315-264, or 265, or satisfying the conditions of the exclusion under Subsection R315-261-4(a)(24) shall provide assurance that funds shall be available if needed for care of the facility under Sections R315-264-110 through 120 or 40 CFR 265.110 through 121, which are adopted by reference; as applicable,

Whereas, the Grantor has elected to establish a trust to provide all or part of such financial assurance for the facilities identified herein,

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee,

Now, Therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

(c) The term "BOARD", "Waste Management and Radiation Control Board" created pursuant to Utah Code Annotated 19-1-106.

(d) The term "DIRECTOR" means the Director, Division of Waste Management and Radiation Control his successors, designees, and any subsequent entity of the State of Utah upon whom the duties of regulation and enforcement of regulations governing hazardous waste.

Section 2. Identification of Facilities and Cost Estimates. This Agreement pertains to the facilities and cost estimates identified on attached Schedule A (on Schedule A, for each facility list the EPA Identification Number, if available; name; address; and the current cost estimates, or portions thereof; for which financial assurance is demonstrated by this Agreement).

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of the Director in the event that the hazardous secondary materials of the grantor no longer meet the conditions of the exclusion under Subsection R315-261-4(a)(24). The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established

initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by Director.

Section 4. Payments from the Fund. The Trustee shall make payments from the Fund as the Director shall direct, in writing, to provide for the payment of the costs of the performance of activities required under Sections R315-264-110 through 120 or 40 CFR 265.110 through 121, which are adopted by reference, for the facilities covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the Director from the Fund for expenditures for such activities in such amounts as the beneficiary shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the Director specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee

by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the Director a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the Director shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the

Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the Director, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendment to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the Director to the Trustee shall be in writing, signed by the Director, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the Director hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the Director, except as provided for herein.

Section 15. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the Director, or by the Trustee and the Director if the Grantor ceases to exist.

Section 16. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the Director, or by the Trustee and the Director, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 17. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the Director issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 18. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the State of (insert name of State).

Section 19. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written: The parties below certify that the wording of this Agreement is identical to the wording specified in Subsection R315-261-151(a)(1) as such regulations were constituted on the date first above written.

(Signature of Grantor)
(Title)

Attest:
(Title)
(Seal)
(Signature of Trustee)

Attest:
(Title)
(Seal)

(2) The following is an example of the certification of acknowledgment which shall accompany the trust agreement for a trust fund as specified in Subsection R315-261-143(a). State of Utah requirements may differ on the proper content of this acknowledgment.

State of County of On this (date), before me personally came (owner or operator) to me known, who, being by me duly sworn, did depose and say that she/he resides at (address), that she/he is (title) of (corporation), the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

(Signature of Notary Public)

(b) A surety bond guaranteeing payment into a trust fund, as specified in Subsection R315-261-143(b), shall be worded as follows, except that instructions in parentheses are to be replaced with the relevant information and the parentheses deleted:

Financial Guarantee Bond

Date bond executed:

Effective date:

Principal: (legal name and business address of owner or operator)

Type of Organization: (insert "individual," "joint venture," "partnership," or "corporation")

State of incorporation:

Surety(ies): (name(s) and business address(es))

EPA and State Identification Numbers, name, address and amount(s) for each facility guaranteed by this bond:

Total penal sum of bond: \$

Surety's bond number:

Know All Persons By These Presents, That we, the Principal and Surety(ies) are firmly bound to the Director of the Division of Waste management and Radiation Control of the State of Utah (hereinafter called the Director) in the event that the hazardous secondary materials at the reclamation or intermediate facility listed below no longer meet the conditions of the exclusion under Subsection R315-261-4(a)(24), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required, under the Utah Solid and Hazardous Waste Act as amended, to have a permit or interim status in order to own or operate each facility identified above, or to meet conditions under Subsection R315-261-4(a)(24), and

Whereas said Principal is required to provide financial assurance as a condition of permit or interim status or as a condition of an exclusion under Subsection R315-261-4(a)(24) and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such

financial assurance;

Now, Therefore, the conditions of the obligation are such that if the Principal shall faithfully, before the beginning of final closure of each facility identified above, fund the standby trust fund in the amount(s) identified above for the facility,

Or, if the Principal shall satisfy all the conditions established for exclusion of hazardous secondary materials from coverage as solid waste under Subsection R315-261-4(a)(24),

Or, if the Principal shall fund the standby trust fund in such amount(s) within 15 days after a final order to begin closure is issued by the Director or a U.S. district court or other court of competent jurisdiction,

Or, if the Principal shall provide alternate financial assurance, as specified in Sections R315-261-140 through 143 and R315-261-147 through 151, as applicable, and obtain the Director's written approval of such assurance, within 90 days after the date notice of cancellation is received by both the Principal and the Director from the Surety(ies), then this obligation shall be null and void; otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the Director that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the Director.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the Director, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by both the Principal and the Director, as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the Director.

(The following paragraph is an optional rider that may be included but is not required.)

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new amount, provided that the penal sum does not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the Director.

In Witness Whereof, the Principal and Surety(ies) have executed this Financial Guarantee Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in Subsection R315-261-151(b) as such regulations were constituted on the date this bond was executed.

Principal
 (Signature(s))
 (Name(s))
 (Title(s))
 (Corporate seal)Corporate Surety(ies)
 (Name and address)
 State of incorporation:Liability limit:
 \$(Signature(s))
 (Name(s) and title(s))
 (Corporate seal)

(For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.)

Bond premium: \$

(c) A letter of credit, as specified in Subsection R315-261-143(c), shall be worded as follows, except that instructions in parentheses are to be replaced with the relevant information and the parentheses deleted:

Irrevocable Standby Letter of Credit
 (Director name), Director,
 Division of Waste Management and Radiation Control
 195 North 1950 West
 P.O Box 144880
 Salt Lake City, Utah 84114-4880

Dear Director: We hereby establish our Irrevocable Standby Letter of Credit No. _____ in your favor, in the event that the hazardous secondary materials at the covered reclamation or intermediary facility(ies) no longer meet the conditions of the exclusion under Subsection R315-261-4(a)(24), at the request and for the account of (owner's or operator's name and address) up to the aggregate amount of (in words) U.S. dollars \$ _____, available upon presentation of

(1) your sight draft, bearing reference to this letter of credit No. _____, and

(2) your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of the Utah Solid and Hazardous Waste Act as amended."

This letter of credit is effective as of (date) and shall expire on (date at least 1 year later), but such expiration date shall be automatically extended for a period of (at least 1 year) on (date) and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify both you, the Director, and (owner's or operator's name) by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event you are so notified, any unused portion of the credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by both you and (owner's or operator's name), as shown on the signed return receipts.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of (owner's or operator's name) in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in Subsection R315-261-151(c) as such regulations were constituted on the date shown immediately below.

(Signature(s) and title(s) of official(s) of issuing institution)
 (Date)

This credit is subject to (insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published and copyrighted by the International Chamber of Commerce," or "the Uniform Commercial Code").

(d) A certificate of insurance, as specified in Subsection R315-261-143(e), shall be worded as follows, except that instructions in parentheses are to be replaced with the relevant information and the parentheses deleted:

Certificate of Insurance
 Name and Address of Insurer (herein called the "Insurer"):
 Name and Address of Insured (herein called the "Insured"):
 Facilities Covered: (List for each facility: The EPA and State Identification Numbers (if any issued), name, address, and the amount of insurance for all facilities covered, which shall total the face amount shown below.)
 Face Amount:
 Policy Number:
 Effective Date:

The Insurer hereby certifies that it has issued to the Insured the policy of insurance identified above to provide financial assurance so that in accordance with applicable regulations all hazardous secondary materials can be removed from the facility or any unit at the facility and the facility or any unit at the facility can be decontaminated at the facilities identified above. The Insurer further warrants that such policy conforms in all respects with the requirements of Subsection R315-261-143(d) as applicable and as such regulations were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such regulations is hereby amended to eliminate such inconsistency.

Whenever requested by the Director of the Division of Waste Management and Radiation Control, the Insurer agrees to furnish to the Director a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in Subsection R315-261-151(d) such regulations were constituted on the date shown immediately below.

(Authorized signature for Insurer)

(Name of person signing)

(Title of person signing)

Signature of witness or notary:(Date)

(e) A letter from the chief financial officer, as specified in Subsection R315-261-143(e), shall be worded as follows, except that instructions in parentheses are to be replaced with the relevant information and the parentheses deleted:

Letter From Chief Financial Officer

Director

Division of Waste Management and Radiation Control

195 North 1950 West

P.O. Box 144880

Salt Lake City, UT 84114-4880

I am the chief financial officer of (name and address of firm). This letter is in support of this firm's use of the financial test to demonstrate financial assurance, as specified in Sections R315-261-140 through 143 and R315-261-147 through 151.

(Fill out the following nine paragraphs regarding facilities and associated cost estimates. If your firm has no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA and State Identification Numbers (if any issued), name, address, and current cost estimates.)

1. This firm is the owner or operator of the following facilities for which financial assurance is demonstrated through the financial test specified in Sections R315-261-140 through 143 and R315-261-147 through 151. The current cost estimates covered by the test are shown for each facility: _____.

2. This firm guarantees, through the guarantee specified in Sections R315-261-140 through 143 and R315-261-147 through 151, the following facilities owned or operated by the guaranteed party. The current cost estimates so guaranteed are shown for each facility: _____. The firm identified above is (insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee _____, or (3) engaged in the following substantial business relationship with the owner or operator _____, and receiving the following value in consideration of this guarantee _____. (Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter).

3. In all other states this firm, as owner or operator or guarantor, is demonstrating financial assurance for the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in Sections R315-261-140 through 143 and R315-261-147 through 151. The current

cost estimates covered by such a test are shown for each facility: _____.

4. This firm is the owner or operator of the following hazardous secondary materials management facilities for which financial assurance is not demonstrated either to EPA or a State through the financial test or any other financial assurance mechanism specified in Sections R315-261-140 through 143 and R315-261-147 through 151 or equivalent or substantially equivalent State mechanisms. The current cost estimates not covered by such financial assurance are shown for each facility: _____.

5. This firm is the owner or operator of the following UIC facilities for which financial assurance for plugging and abandonment is required under 40 CFR 144. The current closure cost estimates as required by 40 CFR 144.62 are shown for each facility: _____.

6. This firm is the owner or operator of the following facilities for which financial assurance for closure or post-closure care is demonstrated through the financial test specified in Sections R315-264-140 through 151 or 40 CFR 265.140 through 150, which are adopted by reference. The current closure and/or post-closure cost estimates covered by the test are shown for each facility: _____.

7. This firm guarantees, through the guarantee specified in Sections R315-264-140 through 151 or 40 CFR 265.140 through 150, which are adopted by reference; the closure or post-closure care of the following facilities owned or operated by the guaranteed party. The current cost estimates for the closure or post-closure care so guaranteed are shown for each facility: _____. The firm identified above is (insert one or more:

(1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee _____; or (3) engaged in the following substantial business relationship with the owner or operator _____, and receiving the following value in consideration of this guarantee _____. (Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter).

8. In other jurisdictions and states where the Director is not authorized to administer the financial requirements of R315-264-140 through 151 or 40 CFR 265.140 through 150, which are adopted by reference, this firm, as owner or operator or guarantor, is demonstrating financial assurance for the closure or post-closure care of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in Sections R315-264-140 through 151 or 40 CFR 265.140 through 150, which are adopted by reference. The current closure and/or post-closure cost estimates covered by such a test are shown for each facility: _____.

9. This firm is the owner or operator of the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, post-closure care, is not demonstrated either to EPA or a State through the financial test or any other financial assurance mechanism specified in Sections R315-264-140 through 151 or 40 CFR 265.140 through 150, which are adopted by reference, or equivalent or substantially equivalent State mechanisms. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility: _____.

This firm (insert "is required" or "is not required") to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on (month, day). The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended (date).

(Fill in Alternative I if the criteria of Subsection R315-261-

143(e)(1)(i) are used. Fill in Alternative II if the criteria of Subsection R315-261-143(e)(1)(ii) are used.)

Alternative I

1. Sum of current cost estimates (total of all cost estimates shown in the nine paragraphs above) \$ _____

*2. Total liabilities (if any portion of the cost estimates is included in total liabilities, you may deduct the amount of that portion from this line and add that amount to lines 3 and 4) \$ _____

*3. Tangible net worth \$ _____

*4. Net worth \$ _____

*5. Current assets \$ _____

*6. Current liabilities \$ _____

7. Net working capital (line 5 minus line 6) \$ _____

*8. The sum of net income plus depreciation, depletion, and amortization \$ _____

*9. Total assets in U.S. (required only if less than 90% of firm's assets are located in the U.S.) \$ _____

10. Is line 3 at least \$10 million? (Yes/No) _____

11. Is line 3 at least 6 times line 1? (Yes/No) _____

12. Is line 7 at least 6 times line 1? (Yes/No) _____

*13. Are at least 90% of firm's assets located in the U.S.?

If not, complete line 14 (Yes/No) _____

14. Is line 9 at least 6 times line 1? (Yes/No) _____

15. Is line 2 divided by line 4 less than 2.0? (Yes/No) _____

_____ 16. Is line 8 divided by line 2 greater than 0.1? (Yes/No) _____

_____ 17. Is line 5 divided by line 6 greater than 1.5? (Yes/No) _____

Alternative II

1. Sum of current cost estimates (total of all cost estimates shown in the eight paragraphs above) \$ _____

2. Current bond rating of most recent issuance of this firm and name of rating service _____

3. Date of issuance of bond _____

4. Date of maturity of bond _____

*5. Tangible net worth (if any portion of the cost estimates is included in "total liabilities" on your firm's financial statements, you may add the amount of that portion to this line) \$ _____

*6. Total assets in U.S. (required only if less than 90% of firm's assets are located in the U.S.) \$ _____

7. Is line 5 at least \$10 million? (Yes/No) _____

8. Is line 5 at least 6 times line 1? (Yes/No) _____

*9. Are at least 90% of firm's assets located in the U.S.? If not, complete line 10 (Yes/No) _____

10. Is line 6 at least 6 times line 1? (Yes/No) _____

I hereby certify that the wording of this letter is identical to the wording specified in Subsection R315-261-151(e) as such regulations were constituted on the date shown immediately below.

(Signature) (Name) (Title) (Date)

(f) A letter from the chief financial officer, as specified in Subsection R315-261-147(f), shall be worded as follows, except that instructions in parentheses are to be replaced with the relevant information and the parentheses deleted.

Letter From Chief Financial Officer

Director

Division of Waste Management and Radiation Control

P.O. 144880

Salt Lake City, Utah 84114-4880

I am the chief financial officer of (firm's name and address). This letter is in support of the use of the financial test to demonstrate financial responsibility for liability coverage under Section R315-261-147(insert "and costs assured Subsection R315-261-143(e)" if applicable) as specified in Sections R315-261-140 through 143 and R315-261-147 through 151.

(Fill out the following paragraphs regarding facilities and

liability coverage. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA Identification Number (if any issued), name, and address).

The firm identified above is the owner or operator of the following facilities for which liability coverage for (insert "sudden" or "nonsudden" or "both sudden and nonsudden") accidental occurrences is being demonstrated through the financial test specified in Sections R315-261-140 through 143 and R315-261-147 through 151: _____

The firm identified above guarantees, through the guarantee specified in Sections R315-261-140 through 143 and R315-261-147 through 151, liability coverage for (insert "sudden" or "nonsudden" or "both sudden and nonsudden") accidental occurrences at the following facilities owned or operated by the following: _____. The firm identified above is (insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee - ____; or (3) engaged in the following substantial business relationship with the owner or operator ____-, and receiving the following value in consideration of this guarantee ____-). (Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter.)

The firm identified above is the owner or operator of the following facilities for which liability coverage for (insert "sudden" or "nonsudden" or "both sudden and nonsudden") accidental occurrences is being demonstrated through the financial test specified in Sections R315-264-140 through 151 and 40 CFR 265.140 through 150, which are adopted by reference: _____

The firm identified above guarantees, through the guarantee specified in Sections R315-264-140 through 151 and 40 CFR 265.140 through 150, which are adopted by reference; liability coverage for (insert "sudden" or "nonsudden" or "both sudden and nonsudden") accidental occurrences at the following facilities owned or operated by the following: _____. The firm identified above is (insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee ____; or (3) engaged in the following substantial business relationship with the owner or operator ___, and receiving the following value in consideration of this guarantee ____). (Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter.)

(If you are using the financial test to demonstrate coverage of both liability and costs assured under Subsection R315-261-143(e) or closure or post-closure care costs under Sections R315-264-143; R315-264-145; 40 CFR 265.143 or 145, which are adopted by reference; fill in the following nine paragraphs regarding facilities and associated cost estimates. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA and State identification number (if any issued), name, address, and current cost estimates.)

1. This firm is the owner or operator of the following facilities for which financial assurance is demonstrated through the financial test specified in Sections R315-261-140 through 143 and R315-261-147 through 151. The current cost estimates covered by the test are shown for each facility: _____.

2. This firm guarantees, through the guarantee specified in Sections R315-261-140 through 143 and R315-261-147 through 151, the following facilities owned or operated by the guaranteed party. The current cost estimates so guaranteed are shown for each facility: _____. The firm identified above is

(insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee _____, or (3) engaged in the following substantial business relationship with the owner or operator _____, and receiving the following value in consideration of this guarantee _____). (Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter).

3. In all other states this firm, as owner or operator or guarantor, is demonstrating financial assurance for the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in Sections R315-261-140 through 143 and R315-261-147 through 151. The current cost estimates covered by such a test are shown for each facility: _____.

4. This firm is the owner or operator of the following hazardous secondary materials management facilities for which financial assurance is not demonstrated either to EPA or a State through the financial test or any other financial assurance mechanism specified in Sections R315-261-140 through 143 and R315-261-147 through 151 or equivalent or substantially equivalent State mechanisms. The current cost estimates not covered by such financial assurance are shown for each facility: _____.

5. This firm is the owner or operator of the following UIC facilities for which financial assurance for plugging and abandonment is required under 40 CFR 144. The current closure cost estimates as required by 40 CFR 144.62 are shown for each facility: _____.

6. This firm is the owner or operator of the following facilities for which financial assurance for closure or post-closure care is demonstrated through the financial test specified in Sections R315-264-140 through 151 and 40 CFR 265.140 through 150, which are adopted by reference. The current closure and/or post-closure cost estimates covered by the test are shown for each facility: _____.

7. This firm guarantees, through the guarantee specified in Sections R315-264-140 through 151 and 40 CFR 265.140 through 150, which are adopted by reference; the closure or post-closure care of the following facilities owned or operated by the guaranteed party. The current cost estimates for the closure or post-closure care so guaranteed are shown for each facility: _____. The firm identified above is (insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee _____; or (3) engaged in the following substantial business relationship with the owner or operator _____, and receiving the following value in consideration of this guarantee _____).

(Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter).

8. In other jurisdictions, and states where the Director is not authorized to administer the financial requirements of R315-264.264-140 through 151 or 40 CFR 265.140 through 150, which are adopted by reference, this firm, as owner or operator or guarantor, is demonstrating financial assurance for the closure or post-closure care of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in Sections R315-264-140 through 151 and 40 CFR 265.140 through 150, which are adopted by reference. The current closure and/or post-closure cost estimates covered by such a test are shown for each facility: _____.

9. This firm is the owner or operator of the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, post-closure care,

is not demonstrated either to EPA or a State through the financial test or any other financial assurance mechanism specified in Sections R315-264-140 through 151 and 40 CFR 265.140 through 150, which are adopted by reference, or equivalent or substantially equivalent State mechanisms. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility: _____.

This firm (insert "is required" or "is not required") to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on (month, day). The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended (date).

Part A. Liability Coverage for Accidental Occurrences

(Fill in Alternative I if the criteria of Subsection R315-261-147(f)(1)(i) are used. Fill in Alternative II if the criteria of Subsection R315-261-147(f)(1)(ii) are used.)

Alternative I

1. Amount of annual aggregate liability coverage to be demonstrated \$ _____.
- *2. Current assets \$ _____.
- *3. Current liabilities \$ _____.
4. Net working capital (line 2 minus line 3) \$ _____.
- *5. Tangible net worth \$ _____.
- *6. If less than 90% of assets are located in the U.S., give total U.S. assets \$ _____.
7. Is line 5 at least \$10 million? (Yes/No) _____.
8. Is line 4 at least 6 times line 1? (Yes/No) _____.
9. Is line 5 at least 6 times line 1? (Yes/No) _____.
- *10. Are at least 90% of assets located in the U.S.? (Yes/No) _____. If not, complete line 11.
11. Is line 6 at least 6 times line 1? (Yes/No) _____.

Alternative II

1. Amount of annual aggregate liability coverage to be demonstrated \$ _____.
2. Current bond rating of most recent issuance and name of rating service _____.
3. Date of issuance of bond _____.
4. Date of maturity of bond _____.
- *5. Tangible net worth \$ _____.
- *6. Total assets in U.S. (required only if less than 90% of assets are located in the U.S.) \$ _____.
7. Is line 5 at least \$10 million? (Yes/No) _____.
8. Is line 5 at least 6 times line 1? _____.
9. Are at least 90% of assets located in the U.S.? If not, complete line 10. (Yes/No) _____.
10. Is line 6 at least 6 times line 1? _____.

(Fill in part B if you are using the financial test to demonstrate assurance of both liability coverage and costs assured under Subsection R315-261-143(e) or closure or post-closure care costs under Sections R315-264-143; R315-264-145; 40 CFR 265.143 or 145, which is adopted by reference.)

Part B. Facility Care and Liability Coverage

(Fill in Alternative I if the criteria of Subsection R315-261-143(e)(1)(i) and Subsection R315-261-147(f)(1)(i) are used. Fill in Alternative II if the criteria of Subsection R315-261-143(e)(1)(ii) and Subsection R315-261-147(f)(1)(ii) are used.)

Alternative I

1. Sum of current cost estimates (total of all cost estimates listed above) \$ _____.
2. Amount of annual aggregate liability coverage to be demonstrated \$ _____.
3. Sum of lines 1 and 2 \$ _____.
- *4. Total liabilities (if any portion of your cost estimates is included in your total liabilities, you may deduct that portion from this line and add that amount to lines 5 and 6) \$ _____.
- *5. Tangible net worth \$ _____.

- *6. Net worth \$ _____ -
 - *7. Current assets \$ _____
 - *8. Current liabilities \$ _____
 - 9. Net working capital (line 7 minus line 8) \$ _____
 - *10. The sum of net income plus depreciation, depletion, and amortization \$ _____ -
 - *11. Total assets in U.S. (required only if less than 90% of assets are located in the U.S.) \$ _____
 - 12. Is line 5 at least \$10 million? (Yes/No)
 - 13. Is line 5 at least 6 times line 3? (Yes/No)
 - 14. Is line 9 at least 6 times line 3? (Yes/No)
 - *15. Are at least 90% of assets located in the U.S.? (Yes/No) If not, complete line 16.
 - 16. Is line 11 at least 6 times line 3? (Yes/No)
 - 17. Is line 4 divided by line 6 less than 2.0? (Yes/No)
 - 18. Is line 10 divided by line 4 greater than 0.1? (Yes/No)
 - 19. Is line 7 divided by line 8 greater than 1.5? (Yes/No)
- Alternative II**
- 1. Sum of current cost estimates (total of all cost estimates listed above) \$ _____ -
 - 2. Amount of annual aggregate liability coverage to be demonstrated \$ _____ -
 - 3. Sum of lines 1 and 2 \$ _____
 - 4. Current bond rating of most recent issuance and name of rating service _____ -
 - 5. Date of issuance of bond _____ ---
 - 6. Date of maturity of bond _____ ---
 - *7. Tangible net worth (if any portion of the cost estimates is included in "total liabilities" on your financial statements you may add that portion to this line) \$ _____ -
 - *8. Total assets in the U.S. (required only if less than 90% of assets are located in the U.S.) \$ _____ -
 - 9. Is line 7 at least \$10 million? (Yes/No)
 - 10. Is line 7 at least 6 times line 3? (Yes/No)
 - *11. Are at least 90% of assets located in the U.S.? (Yes/No) If not complete line 12.
 - 12. Is line 8 at least 6 times line 3? (Yes/No)

I hereby certify that the wording of this letter is identical to the wording specified in Subsection R315-261-151(f) as such regulations were constituted on the date shown immediately below.

(Signature)
 (Name)
 (Title)
 (Date)

(g)(1) A corporate guarantee, as specified in Subsection R315-261-143(e), shall be worded as follows, except that instructions in parentheses are to be replaced with the relevant information and the parentheses deleted:

Corporate Guarantee for Facility Care
 Guarantee made this (date) by (name of guaranteeing entity), a business corporation organized under the laws of the State of (insert name of State), herein referred to as guarantor. This guarantee is made on behalf of the (owner or operator) of (business address), which is (one of the following: "our subsidiary"; "a subsidiary of (name and address of common parent corporation), of which guarantor is a subsidiary"; or "an entity with which guarantor has a substantial business relationship, as defined in Subsections R315-264-141(h) and 40 CFR 265.141(h), which is adopted by reference," to the Director of the Utah Division of Waste Management and Radiation Control (the Director).

Recitals

- 1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in Subsection R315-261-143(e).
- 2. (Owner or operator) owns or operates the following facility(ies) covered by this guarantee: (List for each facility: EPA and State Identification Number (if any issued), name, and

address.

3. "Closure plans" as used below refer to the plans maintained as required by Sections R315-261-140 through 143 and R315-261-147 through 151 for the care of facilities as identified above.

4. For value received from (owner or operator), guarantor guarantees that in the event of a determination by the Director that the hazardous secondary materials at the owner or operator's facility covered by this guarantee do not meet the conditions of the exclusion under Subsection R315-261-4(a)(24), the guarantor shall dispose of any hazardous secondary material as hazardous waste, and close the facility in accordance with closure requirements found in Sections R315-264-110 through 120 or 40 CFR 265-110 through 121 which are adopted by reference, as applicable, or establish a trust fund as specified in Subsection R315-261-143(a) in the name of the owner or operator in the amount of the current cost estimate.

5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within 90 days, by certified mail, notice to the Director and to (owner or operator) that he intends to provide alternate financial assurance as specified in Sections R315-261-140 through 143 and R315-261-147 through 151, as applicable, in the name of (owner or operator). Within 120 days after the end of such fiscal year, the guarantor shall establish such financial assurance unless (owner or operator) has done so.

6. The guarantor agrees to notify the Director by certified mail, of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within 10 days after commencement of the proceeding.

7. Guarantor agrees that within 30 days after being notified by the Director of a determination that guarantor no longer meets the financial test criteria or that he is disallowed from continuing as a guarantor, he shall establish alternate financial assurance as specified in of Sections R315-264-140 through 151 or 40 CFR 265-140 through 150 that are adopted by reference, or Sections R315-261-140 through 143 and R315-261-147 through 151, as applicable, in the name of (owner or operator) unless (owner or operator) has done so.

8. Guarantor agrees to remain bound under this guarantee notwithstanding any or all of the following: amendment or modification of the closure plan, the extension or reduction of the time of performance, or any other modification or alteration of an obligation of the owner or operator pursuant to Rules R315-264, 265, or Sections R315-261-140 through 143 and R315-261-147 through 151.

9. Guarantor agrees to remain bound under this guarantee for as long as (owner or operator) shall comply with the applicable financial assurance requirements of Sections R315-264-140 through 151 or 40 CFR 265-140 through 150 that are adopted by reference, or the financial assurance condition of Subsection R315-261-4(a)(24)(vi)(F) for the above-listed facilities, except as provided in paragraph 10 of this agreement.

10. (Insert the following language if the guarantor is (a) a direct or higher-tier corporate parent, or (b) a firm whose parent corporation is also the parent corporation of the owner or operator):

Guarantor may terminate this guarantee by sending notice by certified mail to the Director and to (owner or operator), provided that this guarantee may not be terminated unless and until (the owner or operator) obtains, and the Director approves, alternate coverage complying with Section R315-261-143.

(Insert the following language if the guarantor is a firm qualifying as a guarantor due to its "substantial business relationship" with the owner or operator)

Guarantor may terminate this guarantee 120 days following the receipt of notification, through certified mail, by the Director and by (the owner or operator).

11. Guarantor agrees that if (owner or operator) fails to provide alternate financial assurance as specified in Sections R315-264-140 through 151 or 40 CFR 265-140 through 150 that are adopted by reference, or Sections R315-261-140 through 143 and R315-261-147 through 151, as applicable, and obtain written approval of such assurance from the Director within 90 days after a notice of cancellation by the guarantor is received by the Director from guarantor, guarantor shall provide such alternate financial assurance in the name of (owner or operator).

12. Guarantor expressly waives notice of acceptance of this guarantee by the Director or by (owner or operator). Guarantor also expressly waives notice of amendments or modifications of the closure plan and of amendments or modifications of the applicable requirements of Sections R315-264-140 through 151 or 40 CFR 265-140 through 150 that are adopted by reference, or Sections R315-261-140 through 143 and R315-261-147 through 151.

I hereby certify that the wording of this guarantee is identical to the wording specified in Subsection R315-261-151(g)(1) as such regulations were constituted on the date first above written.

Effective date: (Name of guarantor) (Authorized signature for guarantor) (Name of person signing) (Title of person signing) Signature of witness or notary:

(2) A guarantee, as specified in Subsection R315-261-147(g), shall be worded as follows, except that instructions in parentheses are to be replaced with the relevant information and the parentheses deleted:

Guarantee for Liability Coverage

Guarantee made this (date) by (name of guaranteeing entity), a business corporation organized under the laws of (if incorporated within the United States insert "the State of ____" and insert name of State; if incorporated outside the United States insert the name of the country in which incorporated, the principal place of business within the United States, and the name and address of the registered agent in the State of the principal place of business), herein referred to as guarantor. This guarantee is made on behalf of (owner or operator) of (business address), which is one of the following: "our subsidiary;" "a subsidiary of (name and address of common parent corporation), of which guarantor is a subsidiary;" or "an entity with which guarantor has a substantial business relationship, as defined in (either Subsection R315-264-141(h) or 40 CFR 265.141(h), which is adopted by reference)", to any and all third parties who have sustained or may sustain bodily injury or property damage caused by (sudden and/or nonsudden) accidental occurrences arising from operation of the facility(ies) covered by this guarantee.

Recitals

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in Subsection R315-261-147(g).

2. (Owner or operator) owns or operates the following facility(ies) covered by this guarantee: (List for each facility: EPA and state identification number (if any issued), name, and address; and if guarantor is incorporated outside the United States list the name and address of the guarantor's registered agent in each State.) This corporate guarantee satisfies RCRA third-party liability requirements for (insert "sudden" or "nonsudden" or "both sudden and nonsudden") accidental occurrences in above-named owner or operator facilities for coverage in the amount of (insert dollar amount) for each occurrence and (insert dollar amount) annual aggregate.

3. For value received from (owner or operator), guarantor guarantees to any and all third parties who have sustained or may sustain bodily injury or property damage caused by (sudden and/or nonsudden) accidental occurrences arising from operations of the facility(ies) covered by this guarantee that in

the event that (owner or operator) fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by (sudden and/or nonsudden) accidental occurrences, arising from the operation of the above-named facilities, or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor shall satisfy such judgment(s), award(s) or settlement agreement(s) up to the limits of coverage identified above.

4. Such obligation does not apply to any of the following:

(a) Bodily injury or property damage for which (insert owner or operator) is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that (insert owner or operator) would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of (insert owner or operator) under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of (insert owner or operator) arising from, and in the course of, employment by (insert owner or operator); or

(2) The spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by (insert owner or operator). This exclusion applies:

(A) Whether (insert owner or operator) may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who shall pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by (insert owner or operator);

(2) Premises that are sold, given away or abandoned by (insert owner or operator) if the property damage arises out of any part of those premises;

(3) Property loaned to (insert owner or operator);

(4) Personal property in the care, custody or control of (insert owner or operator);

(5) That particular part of real property on which (insert owner or operator) or any contractors or subcontractors working directly or indirectly on behalf of (insert owner or operator) are performing operations, if the property damage arises out of these operations.

5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within 90 days, by certified mail, notice to the Director and to (owner or operator) that he intends to provide alternate liability coverage as specified in Section R315-261-147, as applicable, in the name of (owner or operator). Within 120 days after the end of such fiscal year, the guarantor shall establish such liability coverage unless (owner or operator) has done so.

6. The guarantor agrees to notify the Director by certified mail of a voluntary or involuntary proceeding under title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within 10 days after commencement of the proceeding. Guarantor agrees that within 30 days after being notified by the Director of a determination that guarantor no longer meets the financial test criteria or that he is disallowed from continuing as a guarantor, he shall establish alternate liability coverage as specified in Section R315-261-147 in the name of (owner or operator), unless (owner or operator) has done so.

7. Guarantor reserves the right to modify this agreement to

take into account amendment or modification of the liability requirements set by Section R315-261-147, provided that such modification shall become effective only if the Director does not disapprove the modification within 30 days of receipt of notification of the modification.

8. Guarantor agrees to remain bound under this guarantee for so long as (owner or operator) shall comply with the applicable requirements of Section R315-261-147 for the above-listed facility(ies), except as provided in paragraph 10 of this agreement.

9. (Insert the following language if the guarantor is (a) a direct or higher-tier corporate parent, or (b) a firm whose parent corporation is also the parent corporation of the owner or operator):

10. Guarantor may terminate this guarantee by sending notice by certified mail to the Director and to (owner or operator), provided that this guarantee may not be terminated unless and until (the owner or operator) obtains, and the Director approves, alternate liability coverage complying with Section R315-261-147.

(Insert the following language if the guarantor is a firm qualifying as a guarantor due to its "substantial business relationship" with the owner or operator):

Guarantor may terminate this guarantee 120 days following receipt of notification, through certified mail, by the Director and by (the owner or operator).

11. Guarantor hereby expressly waives notice of acceptance of this guarantee by any party.

12. Guarantor agrees that this guarantee is in addition to and does not affect any other responsibility or liability of the guarantor with respect to the covered facilities.

13. The Guarantor shall satisfy a third-party liability claim only on receipt of one of the following documents:

(a) Certification from the Principal and the third-party claimant(s) that the liability claim should be paid. The certification shall be worded as follows, except that instructions in parentheses are to be replaced with the relevant information and the parentheses deleted:

Certification of Valid Claim

The undersigned, as parties (insert Principal) and (insert name and address of third-party claimant(s)), hereby certify that the claim of bodily injury and/or property damage caused by a (sudden or nonsudden) accidental occurrence arising from operating (Principal's) facility should be paid in the amount of \$.

(Signatures) Principal (Notary) Date (Signatures)
Claimant(s) (Notary) Date

(b) A valid final court order establishing a judgment against the Principal for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Principal's facility or group of facilities.

14. In the event of combination of this guarantee with another mechanism to meet liability requirements, this guarantee shall be considered (insert "primary" or "excess") coverage.

I hereby certify that the wording of the guarantee is identical to the wording specified in Subsection R315-261-151(g)(2) as such regulations were constituted on the date shown immediately below.

Effective date:

(Name of guarantor) (Authorized signature for guarantor)
(Name of person signing) (Title of person signing)

Signature of witness or notary:

(h) A hazardous waste facility liability endorsement as required by Section R315-261-147 shall be worded as follows, except that instructions in parentheses are to be replaced with the relevant information and the parentheses deleted:

Hazardous Secondary Material Reclamation/Intermediate Facility Liability Endorsement

1. This endorsement certifies that the policy to which the

endorsement is attached provides liability insurance covering bodily injury and property damage in connection with the insured's obligation to demonstrate financial responsibility under Section R35-261-147. The coverage applies at (list EPA and state Identification Number (if any issued), name, and address for each facility) for (insert "sudden accidental occurrences," "nonsudden accidental occurrences," or "sudden and nonsudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences, and which are insured for both). The limits of liability are (insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's liability), exclusive of legal defense costs.

2. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions of the policy inconsistent with subsections (a) through (e) of this Paragraph 2 are hereby amended to conform with subsections (a) through (e):

(a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy to which this endorsement is attached.

(b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in Subsection R315-261-147(f).

(c) Whenever requested by the Director of the Utah Division of Waste Management and Radiation Control (the Director), the Insurer agrees to furnish to the Director a signed duplicate original of the policy and all endorsements.

(d) Cancellation of this endorsement, whether by the Insurer, the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the facility, shall be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the Director.

(e) Any other termination of this endorsement shall be effective only upon written notice and only after the expiration of thirty (30) days after a copy of such written notice is received by the Director.

Attached to and forming part of policy No. ___ issued by (name of Insurer), herein called the Insurer, of (address of Insurer) to (name of insured) of (address) this ___ day of ___, 20___. The effective date of said policy is ___ day of ___, 20__.

I hereby certify that the wording of this endorsement is identical to the wording specified in Subsection R315-261-151(h) as such regulation was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

(Signature of Authorized Representative of Insurer)

(Type name)

(Title), Authorized Representative of (name of Insurer)

(Address of Representative)

(i) A certificate of liability insurance as required in Section R315-261-147 shall be worded as follows, except that the instructions in parentheses are to be replaced with the relevant information and the parentheses deleted:

Hazardous Secondary Material Reclamation/Intermediate Facility Certificate of Liability Insurance

1. (Name of Insurer), (the "Insurer"), of (address of Insurer) hereby certifies that it has issued liability insurance covering bodily injury and property damage to (name of

insured), (the "insured"), of (address of insured) in connection with the insured's obligation to demonstrate financial responsibility under Rules R315-264 and 265, and the financial assurance condition of Subsection R315-261-4(a)(24)(vi)(F). The coverage applies at (list EPA and state Identification Number (if any issued), name, and address for each facility) for (insert "sudden accidental occurrences," "nonsudden accidental occurrences," or "sudden and nonsudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences, and which are insured for both). The limits of liability are (insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's liability), exclusive of legal defense costs. The coverage is provided under policy number, issued on (date). The effective date of said policy is (date).

2. The Insurer further certifies the following with respect to the insurance described in Paragraph 1:

(a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy.

(b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in Section R315-261-147.

(c) Whenever requested by the Director of the Utah Division of Waste Management and Radiation Control (the Director), the Insurer agrees to furnish to the Director a signed duplicate original of the policy and all endorsements.

(d) Cancellation of the insurance, whether by the insurer, the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the hazardous waste management facility, shall be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the Director.

(e) Any other termination of the insurance shall be effective only upon written notice and only after the expiration of thirty (30) days after a copy of such written notice is received by the Director.

I hereby certify that the wording of this instrument is identical to the wording specified in Subsection R315-261-151(i) as such regulation was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

(Signature of authorized representative of Insurer)

(Type name)

(Title), Authorized Representative of (name of Insurer)

(Address of Representative)

(j) A letter of credit, as specified in Subsection R315-261-147(h) of this chapter, shall be worded as follows, except that instructions in parentheses are to be replaced with the relevant information and the parentheses deleted:

Irrevocable Standby Letter of Credit

(Name and Address of Issuing Institution)

(Director name), Director,

Division of Waste Management and Radiation Control

195 North 1950 West

P.O Box 144880

Salt Lake City, Utah 84114-4880

Dear Sir or Madam:

We hereby establish our Irrevocable Standby Letter of Credit No. _____ in the favor of ("any and all third-party liability claimants" or insert name of trustee of the standby trust fund), at the request and for the account of (owner or operator's name and address) for third-party liability awards or settlements

up to (in words) U.S. dollars \$ _____ per occurrence and the annual aggregate amount of (in words) U.S. dollars \$ ---, for sudden accidental occurrences and/or for third-party liability awards or settlements up to the amount of (in words) U.S. dollars \$ _____ per occurrence, and the annual aggregate amount of (in words) U.S. dollars \$ _____, for nonsudden accidental occurrences available upon presentation of a sight draft bearing reference to this letter of credit No. _____, and (insert the following language if the letter of credit is being used without a standby trust fund: (1) a signed certificate reading as follows:

Certificate of Valid Claim

The undersigned, as parties (insert principal) and (insert name and address of third party claimant(s)), hereby certify that the claim of bodily injury and/or property damage caused by a (sudden or nonsudden) accidental occurrence arising from operations of (principal's) facility should be paid in the amount of \$(). We hereby certify that the claim does not apply to any of the following:

(a) Bodily injury or property damage for which (insert principal) is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that (insert principal) would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of (insert principal) under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of (insert principal) arising from, and in the course of, employment by (insert principal); or

(2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by (insert principal).

This exclusion applies:

(A) Whether (insert principal) may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who shall pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by (insert principal);

(2) Premises that are sold, given away or abandoned by (insert principal) if the property damage arises out of any part of those premises;

(3) Property loaned to (insert principal);

(4) Personal property in the care, custody or control of (insert principal);

(5) That particular part of real property on which (insert principal) or any contractors or subcontractors working directly or indirectly on behalf of (insert principal) are performing operations, if the property damage arises out of these operations.

(Signatures)

Grantor

(Signatures)

Claimant(s)

or (2) a valid final court order establishing a judgment against the Grantor for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Grantor's facility or group of facilities.)

This letter of credit is effective as of (date) and shall expire on (date at least one year later), but such expiration date shall be automatically extended for a period of (at least one year) on (date and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify you, the

Director, and (owner's or operator's name) by certified mail that we have decided not to extend this letter of credit beyond the current expiration date.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us.

(Insert the following language if a standby trust fund is not being used: "In the event that this letter of credit is used in combination with another mechanism for liability coverage, this letter of credit shall be considered (insert "primary" or "excess" coverage)."

We certify that the wording of this letter of credit is identical to the wording specified in Subsection R315-261-151(j) as such regulations were constituted on the date shown immediately below.

(Signature(s)
and title(s) of official(s) of issuing institution)
(Date).

This credit is subject to (insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published and copyrighted by the International Chamber of Commerce," or "the Uniform Commercial Code").

(k) A surety bond, as specified in Subsection R315-261-147(i), shall be worded as follows: except that instructions in parentheses are to be replaced with the relevant information and the parentheses deleted:

Payment Bond

Surety Bond No. (Insert number)

Parties (Insert name and address of owner or operator), Principal, incorporated in (Insert State of incorporation) of (Insert city and State of principal place of business) and (Insert name and address of surety company(ies)), Surety Company(ies), of (Insert surety(ies) place of business).

(EPA and State Identification Number (if any issued), name, and address for each facility guaranteed by this bond:) _____

TABLE

	Nonsudden accidental occurrences	Sudden accidental occurrences
Penal Sum Per Occurrence	(insert amount)	(insert amount)
Annual Aggregate	(insert amount)	(insert amount)

Penal Sum Per Occurrence (insert amount) (insert amount)
Annual Aggregate (insert amount) (insert amount)

Purpose: This is an agreement between the Surety(ies) and the Principal under which the Surety(ies), its(their) successors and assignees, agree to be responsible for the payment of claims against the Principal for bodily injury and/or property damage to third parties caused by ("sudden" and/or "nonsudden") accidental occurrences arising from operations of the facility or group of facilities in the sums prescribed herein; subject to the governing provisions and the following conditions.

Governing Provisions:

(1) Section 3004 of the Resource Conservation and Recovery Act of 1976, as amended.

(2) Rules adopted by the Utah Waste Management and Radiation Control Board, particularly Rules R315-264; 265, that is adopted by reference; and Sections R315-261-140 through 143 and R315-261-147 through 151 (if applicable).

Conditions:

(1) The Principal is subject to the applicable governing provisions that require the Principal to have and maintain liability coverage for bodily injury and property damage to third parties caused by ("sudden" and/or "nonsudden") accidental occurrences arising from operations of the facility or group of facilities. Such obligation does not apply to any of the following:

(a) Bodily injury or property damage for which (insert Principal) is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This

exclusion does not apply to liability for damages that (insert Principal) would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of (insert Principal) under a workers' compensation, disability benefits, or unemployment compensation law or similar law.

(c) Bodily injury to:

(1) An employee of (insert Principal) arising from, and in the course of, employment by (insert principal); or

(2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by (insert Principal). This exclusion applies:

(A) Whether (insert Principal) may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who shall pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by (insert Principal);

(2) Premises that are sold, given away or abandoned by (insert Principal) if the property damage arises out of any part of those premises;

(3) Property loaned to (insert Principal);

(4) Personal property in the care, custody or control of (insert Principal);

(5) That particular part of real property on which (insert Principal) or any contractors or subcontractors working directly or indirectly on behalf of (insert Principal) are performing operations, if the property damage arises out of these operations.

(2) This bond assures that the Principal will satisfy valid third party liability claims, as described in condition 1.

(3) If the Principal fails to satisfy a valid third party liability claim, as described above, the Surety(ies) becomes liable on this bond obligation.

(4) The Surety(ies) shall satisfy a third party liability claim only upon the receipt of one of the following documents:

(a) Certification from the Principal and the third party claimant(s) that the liability claim should be paid. The certification shall be worded as follows, except that instructions in parentheses are to be replaced with the relevant information and the parentheses deleted:

Certification of Valid Claim

The undersigned, as parties (insert name of Principal) and (insert name and address of third party claimant(s)), hereby certify that the claim of bodily injury and/or property damage caused by a (sudden or nonsudden) accidental occurrence arising from operating (Principal's) facility should be paid in the amount of \$().

(Signature)

Principal

(Notary) Date

(Signature(s))

Claimant(s)

(Notary) Date

or (b) A valid final court order establishing a judgment against the Principal for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Principal's facility or group of facilities.

(5) In the event of combination of this bond with another mechanism for liability coverage, this bond shall be considered (insert "primary" or "excess") coverage.

(6) The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the

aggregate to the penal sum of the bond. In no event shall the obligation of the Surety(ies) hereunder exceed the amount of said annual aggregate penal sum, provided that the Surety(ies) furnish(es) notice to the Director forthwith of all claims filed and payments made by the Surety(ies) under this bond.

(7) The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and the Director, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by the Principal and the Director, as evidenced by the return receipt.

(8) The Principal may terminate this bond by sending written notice to the Surety(ies) and to the Director.

(9) The Surety(ies) hereby waive(s) notification of amendments to applicable laws, statutes, rules and regulations and agree(s) that no such amendment shall in any way alleviate its (their) obligation on this bond.

(10) This bond is effective from (insert date) (12:01 a.m., standard time, at the address of the Principal as stated herein) and shall continue in force until terminated as described above.

In Witness Whereof, the Principal and Surety(ies) have executed this Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in Subsection R315-261-151(k), as such regulations were constituted on the date this bond was executed.

PRINCIPAL
(Signature(s))

(Name(s))

(Title(s))

(Corporate Seal)

CORPORATE SURETY(IES)

(Name and address)

State of incorporation: Liability Limit: \$(Signature(s))

(Name(s) and title(s))

(Corporate seal)

(For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.)

Bond premium: \$

(1)(1) A trust agreement, as specified in Subsection R315-261-147(j), shall be worded as follows, except that instructions in parentheses are to be replaced with the relevant information and the parentheses deleted:

Trust Agreement

Trust Agreement, the "Agreement," entered into as of (date) by and between (name of the owner or operator) a (name of State) (insert "corporation," "partnership," "association," or "proprietorship"), the "Grantor," and (name of corporate trustee), (insert, "incorporated in the State of ____" or "a national bank"), the "trustee."

Whereas, the Waste Management and Radiation Control Board of the State of Utah, "the Board", has established certain regulations applicable to the Grantor, requiring that an owner or operator shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental and/or nonsudden accidental occurrences arising from operations of the facility or group of facilities.

Whereas, the Grantor has elected to establish a trust to assure all or part of such financial responsibility for the facilities identified herein.

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee.

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term "BOARD", "Utah Waste Management and Radiation Control Board" created pursuant to Utah Code Annotated 19-1-106.

(b) The term "Director" means the Director, of the Division of Waste Management and Radiation Control his successors, designees, and any subsequent entity of the State of Utah upon whom the duties of regulation and enforcement of regulations governing hazardous waste.

(c) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(d) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of Facilities. This agreement pertains to the facilities identified on attached schedule A (on schedule A, for each facility list the EPA and State Identification Number (if any issued), name, and address of the facility(ies) and the amount of liability coverage, or portions thereof, if more than one instrument affords combined coverage as demonstrated by this Agreement).

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund, hereinafter the "Fund," for the benefit of any and all third parties injured or damaged by (sudden and/or nonsudden) accidental occurrences arising from operation of the facility(ies) covered by this guarantee, in the amounts of ____-(up to \$1 million) per occurrence and (up to \$2 million) annual aggregate for sudden accidental occurrences and ____ (up to \$3 million) per occurrence and ____-(up to \$6 million) annual aggregate for nonsudden occurrences, except that the Fund is not established for the benefit of third parties for the following:

(a) Bodily injury or property damage for which (insert Grantor) is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that (insert Grantor) would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of (insert Grantor) under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of (insert Grantor) arising from, and in the course of, employment by (insert Grantor); or

(2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by (insert Grantor). This exclusion applies:

(A) Whether (insert Grantor) may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who shall pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by (insert Grantor);

(2) Premises that are sold, given away or abandoned by (insert Grantor) if the property damage arises out of any part of those premises;

(3) Property loaned to (insert Grantor);

(4) Personal property in the care, custody or control of (insert Grantor);

(5) That particular part of real property on which (insert Grantor) or any contractors or subcontractors working directly or indirectly on behalf of (insert Grantor) are performing operations, if the property damage arises out of these operations.

In the event of combination with another mechanism for liability coverage, the Fund shall be considered (insert

"primary" or "excess") coverage.

The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by Director.

Section 4. Payment for Bodily Injury or Property Damage. The Trustee shall satisfy a third party liability claim by making payments from the Fund only upon receipt of one of the following documents;

(a) Certification from the Grantor and the third party claimant(s) that the liability claim should be paid. The certification shall be worded as follows, except that instructions in parentheses are to be replaced with the relevant information and the parentheses deleted:

Certification of Valid Claim

The undersigned, as parties (insert Grantor) and (insert name and address of third party claimant(s)), hereby certify that the claim of bodily injury and/or property damage caused by a (sudden or nonsudden) accidental occurrence arising from operating (Grantor's) facility or group of facilities should be paid in the amount of \$().

(Signatures)

Grantor

(Signatures)

Claimant(s)

(b) A valid final court order establishing a judgment against the Grantor for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Grantor's facility or group of facilities.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee shall invest and reinvest the principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstance then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held unless they are securities or other obligations of the Federal or a State government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common commingled, or collective trust fund created by the Trustee in which the fund is eligible to

participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 81a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuations. The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the Director a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the Director shall constitute a conclusively binding assent by the Grantor barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent

permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the Director, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendments to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the Director to the Trustee shall be in writing, signed by the Director, or their designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the Director hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the Director, except as provided for herein.

Section 15. Notice of Nonpayment. If a payment for bodily injury or property damage is made under Section 4 of this trust, the Trustee shall notify the Grantor of such payment and the amount(s) thereof within five (5) working days. The Grantor shall, on or before the anniversary date of the establishment of the Fund following such notice, either make payments to the Trustee in amounts sufficient to cause the trust to return to its value immediately prior to the payment of claims under Section 4, or shall provide written proof to the Trustee that other financial assurance for liability coverage has been obtained equaling the amount necessary to return the trust to its value prior to the payment of claims. If the Grantor does not either make payments to the Trustee or provide the Trustee with such proof, the Trustee shall within 10 working days after the anniversary date of the establishment of the Fund provide a written notice of nonpayment to the Director.

Section 16. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the Director, or by the Trustee and the Director if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the Director, or by the Trustee and the Director, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

The Director shall agree to termination of the Trust when the owner or operator substitutes alternate financial assurance as specified in this section.

Section 18. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the Director issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the State of Utah.

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in Subsection R315-261-151(l) as such regulations were constituted on the date first above written.

(Signature of Grantor)

(Title)

Attest:

(Title)

(Seal)

(Signature of Trustee)

Attest:

(Title)

(Seal)

(2) The following is an example of the certification of acknowledgement which shall accompany the trust agreement for a trust fund as specified in Subsection R315-261-147(j). State requirements may differ on the proper

State of
County of

On this (date), before me personally came (owner or operator) to me known, who, being by me duly sworn, did depose and say that she/he resides at (address), that she/he is (title) of (corporation), the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/ his name thereto by like order.

(Signature of Notary Public)

(m)(1) A standby trust agreement, as specified in Subsection R315-261-147(h), shall be worded as follows, except that instructions in parentheses are to be replaced with the relevant information and the parentheses deleted:

Standby Trust Agreement

Trust Agreement, the "Agreement," entered into as of (date) by and between (name of the owner or operator) a (name of a State) (insert "corporation," "partnership," "association," or "proprietorship"), the "Grantor," and (name of corporate trustee), (insert, "incorporated in the State of _____" or "a national bank"), the "trustee."

Whereas the Utah Waste Management and Radiation Control Board (Board), has established certain regulations applicable to the Grantor, requiring that an owner or operator shall demonstrate financial responsibility for bodily injury and

property damage to third parties caused by sudden accidental and/or nonsudden accidental occurrences arising from operations of the facility or group of facilities.

Whereas, the Grantor has elected to establish a standby trust into which the proceeds from a letter of credit may be deposited to assure all or part of such financial responsibility for the facilities identified herein.

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee.

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term "Board", "Utah Waste Management and Radiation Control Board" created pursuant to Utah Code Annotated 19-1-106.

(b) The term "Director" means the Director, of the Division of Waste Management and Radiation Control his successors, designees, and any subsequent entity of the State of Utah upon whom the duties of regulation and enforcement of regulations governing hazardous waste.

(c) The term Grantor means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(d) The term Trustee means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of Facilities. This Agreement pertains to the facilities identified on attached schedule A (on schedule A, for each facility list the EPA and State Identification Number (if any issued), name, and address of the facility(ies) and the amount of liability coverage, or portions thereof, if more than one instrument affords combined coverage as demonstrated by this Agreement).

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a standby trust fund, hereafter the "Fund," for the benefit of any and all third parties injured or damaged by (sudden and/or nonsudden) accidental occurrences arising from operation of the facility(ies) covered by this guarantee, in the amounts of ____-(up to \$1 million) per occurrence and ____-(up to \$2 million) annual aggregate for sudden accidental occurrences and ____-(up to \$3 million) per occurrence and ____-(up to \$6 million) annual aggregate for nonsudden occurrences, except that the Fund is not established for the benefit of third parties for the following:

(a) Bodily injury or property damage for which (insert Grantor) is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that (insert Grantor) would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of (insert Grantor) under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of (insert Grantor) arising from, and in the course of, employment by (insert Grantor); or

(2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by (insert Grantor).

This exclusion applies:

(A) Whether (insert Grantor) may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who shall pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by (insert Grantor);

(2) Premises that are sold, given away or abandoned by (insert Grantor) if the property damage arises out of any part of those premises;

(3) Property loaned by (insert Grantor);

(4) Personal property in the care, custody or control of (insert Grantor);

(5) That particular part of real property on which (insert Grantor) or any contractors or subcontractors working directly or indirectly on behalf of (insert Grantor) are performing operations, if the property damage arises out of these operations.

In the event of combination with another mechanism for liability coverage, the Fund shall be considered (insert "primary" or "excess") coverage.

The Fund is established initially as consisting of the proceeds of the letter of credit deposited into the Fund. Such proceeds and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the Director.

Section 4. Payment for Bodily Injury or Property Damage. The Trustee shall satisfy a third party liability claim by drawing on the letter of credit described in Schedule B and by making payments from the Fund only upon receipt of one of the following documents:

(a) Certification from the Grantor and the third party claimant(s) that the liability claim should be paid. The certification shall be worded as follows, except that instructions in parentheses are to be replaced with the relevant information and the parentheses deleted:

Certification of Valid Claim

The undersigned, as parties (insert Grantor) and (insert name and address of third party claimant(s)), hereby certify that the claim of bodily injury and/or property damage caused by a (sudden or nonsudden) accidental occurrence arising from operating (Grantor's) facility should be paid in the amount of \$()

(Signature)

Grantor

(Signatures)

Claimant(s)

(b) A valid final court order establishing a judgment against the Grantor for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Grantor's facility or group of facilities.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of the proceeds from the letter of credit drawn upon by the Trustee in accordance with the requirements of Subsection R315-261-151(k) and Section 4 of this Agreement.

Section 6. Trustee Management. The Trustee shall invest and reinvest the principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any

other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or a State government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve Bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements to the Trustee shall be paid from the Fund.

Section 10. Advice of Counsel. The Trustee may from

time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 11. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 12. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the Director and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 13. Instructions to the Trustee. All orders, requests, certifications of valid claims, and instructions to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendments to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the Director hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the Director, except as provided for herein.

Section 14. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the Director, or by the Trustee and the Director if the Grantor ceases to exist.

Section 15. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 14, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the Director, or by the Trustee and the Director, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be paid to the Grantor.

The Director shall agree to termination of the Trust when the owner or operator substitutes alternative financial assurance as specified in this section.

Section 16. Immunity and indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor and the Director issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 17. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of

the State of Utah.

Section 18. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation of the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in Subsection R315-261-151(m) as such regulations were constituted on the date first above written.

(Signature of Grantor)

(Title)

Attest:

(Title)

(Seal)

(Signature of Trustee)

Attest:

(Title)

(Seal)

(2) The following is an example of the certification of acknowledgement which shall accompany the trust agreement for a standby trust fund as specified in Subsection R315-261-147(h).

State of

County of

On this (date), before me personally came (owner or operator) to me known, who, being by me duly sworn, did depose and say that she/he resides at (address), that she/he is (title) of (corporation), the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/ his name thereto by like order.

(Signature of Notary Public)

R315-261-170. Use and Management of Containers - Applicability.

Sections R315-261-170 through 179 apply to hazardous secondary materials excluded under the remanufacturing exclusion at Subsection R315-261-4(a)(27) and stored in containers.

R315-261-171. Use and Management of Containers - Condition of Containers.

If a container holding hazardous secondary material is not in good condition, e.g., severe rusting, apparent structural defects, or if it begins to leak, the hazardous secondary material shall be transferred from this container to a container that is in good condition or managed in some other way that complies with the requirements of Rule R315-261.

R315-261-172. Use and Management of Containers - Compatibility Of Hazardous Secondary Materials With Containers.

The container shall be made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous secondary material to be stored, so that the ability of the container to contain the material is not impaired.

R315-261-173. Use and Management of Containers - Management of Containers.

(a) A container holding hazardous secondary material shall always be closed during storage, except when it is necessary to add or remove the hazardous secondary material.

(b) A container holding hazardous secondary material shall

not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

R315-261-175. Use and Management of Containers - Containment.

(a) Container storage areas shall have a containment system that is designed and operated in accordance with Subsection R315-261-175(b).

(b) A containment system shall be designed and operated as follows:

(1) A base shall underlie the containers which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed;

(2) The base shall be sloped or the containment system shall be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids;

(3) The containment system shall have sufficient capacity to contain 10% of the volume of containers or the volume of the largest container, whichever is greater.

(4) Run-on into the containment system shall be prevented unless the collection system has sufficient excess capacity in addition to that required in Subsection R315-261-175(b)(3) to contain any run-on which might enter the system; and

(5) Spilled or leaked material and accumulated precipitation shall be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system.

R315-261-176. Use and Management of Containers - Special Requirements for Ignitable or Reactive Hazardous Secondary Material.

Containers holding ignitable or reactive hazardous secondary material shall be located at least 15 meters (50 feet) from the facility's property line.

R315-261-177. Use and Management of Containers - Special Requirements for Incompatible Materials.

(a) Incompatible materials shall not be placed in the same container.

(b) Hazardous secondary material shall not be placed in an unwashed container that previously held an incompatible material.

(c) A storage container holding a hazardous secondary material that is incompatible with any other materials stored nearby shall be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

R315-261-179. Use and Management of Containers - Air Emission Standards.

The remanufacturer or other person that stores or treats the hazardous secondary material shall manage all hazardous secondary material placed in a container in accordance with the applicable requirements of Sections R315-261-1030 through 1035, 1050 through 1064 and 1080 through 1089.

R315-261-190. Tank Systems - Applicability.

(a) The requirements of Sections R315-261-190 through 200 apply to tank systems for storing or treating hazardous secondary material excluded under the remanufacturing exclusion at Subsection R315-261-4(a)(27).

(b) Tank systems, including sumps, as defined in Section R315-260-10, that serve as part of a secondary containment system to collect or contain releases of hazardous secondary materials are exempted from the requirements in Subsection R315-261-193(a).

R315-261-191. Tank Systems - Assessment of Existing Tank System's Integrity.

(a) Tank systems shall meet the secondary containment requirements of Section R315-261-193, or the remanufacturer or other person that handles the hazardous secondary material shall determine that the tank system is not leaking or is unfit for use. Except as provided in Subsection R315-261-191(c), a written assessment reviewed and certified by a qualified Professional Engineer shall be kept on file at the remanufacturer's facility or other facility that stores or treats the hazardous secondary material that attests to the tank system's integrity.

(b) This assessment shall determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the material(s) to be stored or treated, to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment shall consider the following:

- (1) Design standard(s), if available, according to which the tank and ancillary equipment were constructed;
- (2) Hazardous characteristics of the material(s) that have been and will be handled;
- (3) Existing corrosion protection measures;
- (4) Documented age of the tank system, if available, otherwise, an estimate of the age; and
- (5) Results of a leak test, internal inspection, or other tank integrity examination such that:

(i) For non-enterable underground tanks, the assessment shall include a leak test that is capable of taking into account the effects of temperature variations, tank end deflection, vapor pockets, and high water table effects, and

(ii) For other than non-enterable underground tanks and for ancillary equipment, this assessment shall include either a leak test, as described above, or other integrity examination that is certified by a qualified Professional Engineer that addresses cracks, leaks, corrosion, and erosion.

Note to Subsection R315-261-191(b)(5)(ii): The practices described in the American Petroleum Institute (API) Publication, Guide for Inspection of Refinery Equipment, Chapter XIII, "Atmospheric and Low-Pressure Storage Tanks," 4th edition, 1981, may be used, where applicable, as guidelines in conducting other than a leak test.

(c) If, as a result of the assessment conducted in accordance with Subsection R315-261-191(a), a tank system is found to be leaking or unfit for use, the remanufacturer or other person that stores or treats the hazardous secondary material shall comply with the requirements of Section R315-261-196.

R315-261-193. Tank Systems - Containment and Detection of Releases.

(a) Secondary containment systems shall be:

- (1) Designed, installed, and operated to prevent any migration of materials or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and
- (2) Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

Note to Subsection R315-261-193(a): If the collected material is a hazardous waste under Rule R315-261, it is subject to management as a hazardous waste in accordance with all applicable requirements of Rules R315-262 through 265, 266, and 268. If the collected material is discharged through a point source to waters of the United States, it is subject to the requirements of sections 301, 304, and 402 of the Clean Water Act, as amended. If discharged to a Publicly Owned Treatment Works (POTW), it is subject to the requirements of section 307 of the Clean Water Act, as amended. If the collected material is released to the environment, it may be subject to the reporting requirements of 40 CFR part 302.

(b) To meet the requirements of Subsection R315-261-

193(a), secondary containment systems shall be at a minimum:

(1) Constructed of or lined with materials that are compatible with the materials(s) to be placed in the tank system and shall have sufficient strength and thickness to prevent failure owing to pressure gradients, including static head and external hydrological forces, physical contact with the material to which it is exposed, climatic conditions, and the stress of daily operation, (including stresses from nearby vehicular traffic;

(2) Placed on a foundation or base capable of providing support to the secondary containment system, resistance to pressure gradients above and below the system, and capable of preventing failure due to settlement, compression, or uplift;

(3) Provided with a leak-detection system that is designed and operated so that it will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous secondary material or accumulated liquid in the secondary containment system at the earliest practicable time; and

(4) Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked material and accumulated precipitation shall be removed from the secondary containment system within 24 hours, or in as timely a manner as is possible to prevent harm to human health and the environment.

(c) Secondary containment for tanks shall include one or more of the following devices:

- (1) A liner, external to the tank;
- (2) A vault; or
- (3) A double-walled tank.

(d) In addition to the requirements of Subsections R315-261-193(a), (b), and (c), secondary containment systems shall satisfy the following requirements:

(1) External liner systems shall be:

(i) Designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;

(ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity shall be sufficient to contain precipitation from a 25-year, 24-hour rainfall event.

(iii) Free of cracks or gaps; and

(iv) Designed and installed to surround the tank completely and to cover all surrounding earth likely to come into contact with the material if the material is released from the tank(s), i.e., capable of preventing lateral as well as vertical migration of the material.

(2) Vault systems shall be:

(i) Designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;

(ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity shall be sufficient to contain precipitation from a 25-year, 24-hour rainfall event;

(iii) Constructed with chemical-resistant water stops in place at all joints, if any;

(iv) Provided with an impermeable interior coating or lining that is compatible with the stored material and that will prevent migration of material into the concrete;

(v) Provided with a means to protect against the formation of and ignition of vapors within the vault, if the material being stored or treated is ignitable or reactive; and

(vi) Provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.

(3) Double-walled tanks shall be:

(i) Designed as an integral structure, i.e., an inner tank completely enveloped within an outer shell, so that any release from the inner tank is contained by the outer shell;

(ii) Protected, if constructed of metal, from both corrosion of the primary tank interior and of the external surface of the outer shell; and

(iii) Provided with a built-in continuous leak detection system capable of detecting a release within 24 hours, or at the earliest practicable time.

Note to Subsection R315-261-193(d)(3): The provisions outlined in the Steel Tank Institute's (STI) "Standard for Dual Wall Underground Steel Storage Tanks" may be used as guidelines for aspects of the design of underground steel double-walled tanks.

(e) Reserved

(f) Ancillary equipment shall be provided with secondary containment, e.g., trench, jacketing, double-walled piping, that meets the requirements of Subsections R315-261-193(a) and (b) except for:

(1) Aboveground piping, exclusive of flanges, joints, valves, and other connections, that are visually inspected for leaks on a daily basis;

(2) Welded flanges, welded joints, and welded connections that are visually inspected for leaks on a daily basis;

(3) Sealless or magnetic coupling pumps and sealless valves that are visually inspected for leaks on a daily basis; and

(4) Pressurized aboveground piping systems with automatic shut-off devices, e.g., excess flow check valves, flow metering shutdown devices, loss of pressure actuated shut-off devices, that are visually inspected for leaks on a daily basis.

R315-261-194. Tank Systems - General Operating Requirements.

(a) Hazardous secondary materials or treatment reagents shall not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.

(b) The remanufacturer or other person that stores or treats the hazardous secondary material shall use appropriate controls and practices to prevent spills and overflows from tank or containment systems. These include at a minimum:

(1) Spill prevention controls, e.g., check valves, dry disconnect couplings;

(2) Overfill prevention controls, e.g., level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank; and

(3) Maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.

(c) The remanufacturer or other person that stores or treats the hazardous secondary material shall comply with the requirements of Section R315-261-196 if a leak or spill occurs in the tank system.

R315-261-196. Tank Systems - Response To Leaks or Spills and Disposition of Leaking or Unfit-For-Use Tank Systems.

A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, shall be removed from service immediately, and the remanufacturer or other person that stores or treats the hazardous secondary material shall satisfy the following requirements:

(a) Cessation of use; prevent flow or addition of materials. The remanufacturer or other person that stores or treats the hazardous secondary material shall immediately stop the flow of hazardous secondary material into the tank system or secondary containment system and inspect the system to determine the cause of the release.

(b) Removal of material from tank system or secondary

containment system.

(1) If the release was from the tank system, the remanufacturer or other person that stores or treats the hazardous secondary material shall, within 24 hours after detection of the leak or, if the remanufacturer or other person that stores or treats the hazardous secondary material demonstrates that it is not possible, at the earliest practicable time, remove as much of the material as is necessary to prevent further release of hazardous secondary material to the environment and to allow inspection and repair of the tank system to be performed.

(2) If the material released was to a secondary containment system, all released materials shall be removed within 24 hours or in as timely a manner as is possible to prevent harm to human health and the environment.

(c) Containment of visible releases to the environment. The remanufacturer or other person that stores or treats the hazardous secondary material shall immediately conduct a visual inspection of the release and, based upon that inspection:

(1) Prevent further migration of the leak or spill to soils or surface water; and

(2) Remove, and properly dispose of, any visible contamination of the soil or surface water.

(d) Notifications, reports.

(1) Any release to the environment, except as provided in Subsection R315-261-196(d)(2), shall be reported to the Director within 24 hours of its detection. If the release has been reported pursuant to 40 CFR part 302, that report will satisfy this requirement.

(2) A leak or spill of hazardous secondary material is exempted from the requirements of Subsection R315-261-196(d) if it is:

(i) Less than or equal to a quantity of 1 pound, and

(ii) Immediately contained and cleaned up.

(3) Within 30 days of detection of a release to the environment, a report containing the following information shall be submitted to the Director:

(i) Likely route of migration of the release;

(ii) Characteristics of the surrounding soil, soil composition, geology, hydrogeology, climate;

(iii) Results of any monitoring or sampling conducted in connection with the release, if available. If sampling or monitoring data relating to the release are not available within 30 days, these data shall be submitted to the Director as soon as they become available.

(iv) Proximity to downgradient drinking water, surface water, and populated areas; and

(v) Description of response actions taken or planned.

(e) Provision of secondary containment, repair, or closure.

(1) Unless the remanufacturer or other person that stores or treats the hazardous secondary material satisfies the requirements of Subsections R315-261-196(e)(2) through (4), the tank system shall cease to operate under the remanufacturing exclusion at Subsection R315-261-4(a)(27).

(2) If the cause of the release was a spill that has not damaged the integrity of the system, the remanufacturer or other person that stores or treats the hazardous secondary material may return the system to service as soon as the released material is removed and repairs, if necessary, are made.

(3) If the cause of the release was a leak from the primary tank system into the secondary containment system, the system shall be repaired prior to returning the tank system to service.

(4) If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the remanufacturer or other person that stores or treats the hazardous secondary material shall provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of Section R315-261-193 before it can be returned to service, unless the

source of the leak is an aboveground portion of a tank system that can be inspected visually. If the source is an aboveground component that can be inspected visually, the component shall be repaired and may be returned to service without secondary containment as long as the requirements of Subsection R315-261-196(f) are satisfied. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection, e.g., the bottom of an inground or onground tank, the entire component shall be provided with secondary containment in accordance with Section R315-261-193 prior to being returned to use.

(f) Certification of major repairs. If the remanufacturer or other person that stores or treats the hazardous secondary material has repaired a tank system in accordance with Subsection R315-261-196(e), and the repair has been extensive, e.g., installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel, the tank system shall not be returned to service unless the remanufacturer or other person that stores or treats the hazardous secondary material has obtained a certification by a qualified Professional Engineer that the repaired system is capable of handling hazardous secondary materials without release for the intended life of the system. This certification shall be kept on file at the facility and maintained until closure of the facility.

Note 1 to Section R315-261-196: The Director may, on the basis of any information received that there is or has been a release of hazardous secondary material or hazardous constituents into the environment, issue an order under RCRA section 7003(a) requiring corrective action or such other response as deemed necessary to protect human health or the environment.

Note 2 to Section R315-261-196: 40 CFR part 302 may require the owner or operator to notify the National Response Center of certain releases.

R315-261-197. Tank Systems - Termination of Remanufacturing Exclusion.

Hazardous secondary material stored in units more than 90 days after the unit ceases to operate under the remanufacturing exclusion at Subsection R315-261-4(a)(27) or otherwise ceases to be operated for manufacturing, or for storage of a product or a raw material, then becomes subject to regulation as hazardous waste under Rules R315-261 through 266, 268, 270, and 124, as applicable.

R315-261-198. Tank Systems - Special Requirements for Ignitable or Reactive Materials.

(a) Ignitable or reactive material shall not be placed in tank systems, unless the material is stored or treated in such a way that it is protected from any material or conditions that may cause the material to ignite or react.

(b) The remanufacturer or other person that stores or treats hazardous secondary material which is ignitable or reactive shall store or treat the hazardous secondary material in a tank that is in compliance with the requirements for the maintenance of protective distances between the material management area and any public ways, streets, alleys, or an adjoining property line that can be built upon as required in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code," (1977 or 1981), incorporated by reference, see Section R315-260-11.

R315-261-199. Tank Systems - Special Requirements for Incompatible Materials.

(a) Incompatible materials shall not be placed in the same tank system.

(b) Hazardous secondary material shall not be placed in a tank system that has not been decontaminated and that previously held an incompatible material.

R315-261-200. Tank Systems - Air Emission Standards.

The remanufacturer or other person that stores or treats the hazardous secondary material shall manage all hazardous secondary material placed in a tank in accordance with the applicable requirements of Sections R315-261-1030 through 1035, 1050 through 1064, and 1080 through 1089.

R315-261-400. Emergency Preparedness and Response for Management of Excluded Hazardous Secondary Materials - Applicability.

The requirements of Sections R315-261-400, 410, 411, and 420 apply to those areas of an entity managing hazardous secondary materials excluded under Subsection R315-261-4(a)(23) and/or (24) where hazardous secondary materials are generated or accumulated on site.

(a) A generator of hazardous secondary material, or an intermediate or reclamation facility operating under a verified recycler variance under Subsection R315-260-31(d), that accumulates 6000 kg or less of hazardous secondary material at any time shall comply with Sections R315-261-410 and 411.

(b) A generator of hazardous secondary material, or an intermediate or reclamation facility operating under a verified recycler variance under Subsection R315-260-31(d) that accumulates more than 6000 kg of hazardous secondary material at any time shall comply with Sections R315-261-410 and 420.

R315-261-410. Emergency Preparedness and Response for Management of Excluded Hazardous Secondary Materials - Preparedness and Prevention.

(a) Maintenance and operation of facility. Facilities generating or accumulating hazardous secondary material shall be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous secondary materials or hazardous secondary material constituents to air, soil, or surface water which could threaten human health or the environment.

(b) Required equipment. All facilities generating or accumulating hazardous secondary material shall be equipped with the following, unless none of the hazards posed by hazardous secondary material handled at the facility could require a particular kind of equipment specified below:

(1) An internal communications or alarm system capable of providing immediate emergency instruction, voice or signal, to facility personnel;

(2) A device, such as a telephone, immediately available at the scene of operations, or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;

(3) Portable fire extinguishers, fire control equipment, including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals, spill control equipment, and decontamination equipment; and

(4) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.

(c) Testing and maintenance of equipment. All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, shall be tested and maintained as necessary to assure its proper operation in time of emergency.

(d) Access to communications or alarm system.

(1) Whenever hazardous secondary material is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation shall have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required under Subsection R315-261-410(b).

(2) If there is ever just one employee on the premises while the facility is operating, he shall have immediate access to a device, such as a telephone, immediately available at the scene of operation, or a hand-held two-way radio, capable of summoning external emergency assistance, unless such a device is not required under Subsection R315-261-410(b).

(e) Required aisle space. The hazardous secondary material generator or intermediate or reclamation facility operating under a verified recycler variance under Subsection R315-260-31(d) shall maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless aisle space is not needed for any of these purposes.

(f) Arrangements with local authorities.

(1) The hazardous secondary material generator or an intermediate or reclamation facility operating under a verified recycler variance under Subsection R315-260-31(d) shall attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations:

(i) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous secondary material handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes;

(ii) Where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority;

(iii) Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and

(iv) Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

(2) Where state or local authorities decline to enter into such arrangements, the hazardous secondary material generator or an intermediate or reclamation facility operating under a verified recycler variance under Subsection R315-260-31(d) shall document the refusal in the operating record.

R315-261-411. Emergency Preparedness and Response for Management of Excluded Hazardous Secondary Materials - Emergency Procedures for Facilities Generating or Accumulating 6000 Kg or Less of Hazardous Secondary Material.

A generator or an intermediate or reclamation facility operating under a verified recycler variance under Subsection R315-260-31(d) that generates or accumulates 6000 kg or less of hazardous secondary material shall comply with the following requirements:

(a) At all times there shall be at least one employee either on the premises or on call, i.e., available to respond to an emergency by reaching the facility within a short period of time, with the responsibility for coordinating all emergency response measures specified in Subsection R315-261-411(d). This employee is the emergency coordinator.

(b) The generator or intermediate or reclamation facility operating under a verified recycler variance under Subsection R315-260-31(d) shall post the following information next to the telephone:

(1) The name and telephone number of the emergency coordinator;

(2) Location of fire extinguishers and spill control material, and, if present, fire alarm; and

(3) The telephone number of the fire department, unless

the facility has a direct alarm.

(c) The generator or an intermediate or reclamation facility operating under a verified recycler variance under Subsection R315-260-31(d) shall ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies;

(d) The emergency coordinator or his designee shall respond to any emergencies that arise. The applicable responses are as follows:

(1) In the event of a fire, call the fire department or attempt to extinguish it using a fire extinguisher;

(2) In the event of a spill, contain the flow of hazardous waste to the extent possible, and as soon as is practicable, clean up the hazardous waste and any contaminated materials or soil;

(3) In the event of a fire, explosion, or other release which could threaten human health outside the facility or when the generator or an intermediate or reclamation facility operating under a verified recycler variance under Subsection R315-260-31(d) has knowledge that a spill has reached surface water, the generator or an intermediate or reclamation facility operating under a verified recycler variance under Subsection R315-260-31(d) shall immediately notify the National Response Center, using their 24-hour toll free number 800/424-8802 and follow the requirements Section R316-263-33. The report shall include the following information:

(i) The name, address, and U.S. EPA Identification Number of the facility;

(ii) Date, time, and type of incident, e.g., spill or fire;

(iii) Quantity and type of hazardous waste involved in the incident;

(iv) Extent of injuries, if any; and

(v) Estimated quantity and disposition of recovered materials, if any.

R315-261-420. Emergency Preparedness and Response for Management of Excluded Hazardous Secondary Materials - Contingency Planning and Emergency Procedures for Facilities Generating or Accumulating More Than 6000 Kg of Hazardous Secondary Material.

A generator or an intermediate or reclamation facility operating under a verified recycler variance under Subsection R315-260-31(d) that generates or accumulates more than 6000 kg of hazardous secondary material shall comply with the following requirements:

(a) Purpose and implementation of contingency plan.

(1) Each generator or an intermediate or reclamation facility operating under a verified recycler variance under Subsection R315-260-31(d) that accumulates more than 6000 kg of hazardous secondary material shall have a contingency plan for his facility. The contingency plan shall be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous secondary material or hazardous secondary material constituents to air, soil, or surface water.

(2) The provisions of the plan shall be carried out immediately whenever there is a fire, explosion, or release of hazardous secondary material or hazardous secondary material constituents which could threaten human health or the environment.

(b) Content of contingency plan.

(1) The contingency plan shall describe the actions facility personnel shall take to comply with Subsection R315-261-420(a) and (f) in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous secondary material or hazardous secondary material constituents to air, soil, or surface water at the facility.

(2) If the generator or an intermediate or reclamation facility operating under a verified recycler variance under

Subsection R315-260-31(d) accumulating more than 6000 kg of hazardous secondary material has already prepared a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with 40 CFR 112, or some other emergency or contingency plan, he need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of Rule R315-261. The hazardous secondary material generator or an intermediate or reclamation facility operating under a verified recycler variance under Subsection R315-260-31(d) may develop one contingency plan which meets all regulatory requirements. The Director recommends that the plan be based on the National Response Team's Integrated Contingency Plan Guidance ("One Plan"). When modifications are made to non-hazardous waste provisions in an integrated contingency plan, the changes do not trigger the need for a hazardous waste permit modification.

(3) The plan shall describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services, pursuant to Subsection R315-262-410(f).

(4) The plan shall list names, addresses, and phone numbers, office and home, of all persons qualified to act as emergency coordinator, see Subsection R315-261-420(e), and this list shall be kept up-to-date. Where more than one person is listed, one shall be named as primary emergency coordinator and others shall be listed in the order in which they shall assume responsibility as alternates.

(5) The plan shall include a list of all emergency equipment at the facility, such as fire extinguishing systems, spill control equipment, communications and alarm systems, internal and external, and decontamination equipment, where this equipment is required. This list shall be kept up to date. In addition, the plan shall include the location and a physical description of each item on the list, and a brief outline of its capabilities.

(6) The plan shall include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan shall describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes, in cases where the primary routes could be blocked by releases of hazardous waste or fires.

(c) Copies of contingency plan. A copy of the contingency plan and all revisions to the plan shall be:

(1) Maintained at the facility; and

(2) Submitted to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services.

(d) Amendment of contingency plan. The contingency plan shall be reviewed, and immediately amended, if necessary, whenever:

(1) Applicable regulations are revised;

(2) The plan fails in an emergency;

(3) The facility changes in its design, construction, operation, maintenance, or other circumstances in a way that materially increases the potential for fires, explosions, or releases of hazardous secondary material or hazardous secondary material constituents, or changes the response necessary in an emergency;

(4) The list of emergency coordinators changes; or

(5) The list of emergency equipment changes.

(e) Emergency coordinator. At all times, there shall be at least one employee either on the facility premises or on call, i.e., available to respond to an emergency by reaching the facility within a short period of time, with the responsibility for coordinating all emergency response measures. This emergency coordinator shall be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout.

In addition, this person shall have the authority to commit the resources needed to carry out the contingency plan. The emergency coordinator's responsibilities are more fully spelled out in Subsection R315-261-420(f). Applicable responsibilities for the emergency coordinator vary, depending on factors such as type and variety of hazardous secondary material(s) handled by the facility, and type and complexity of the facility.

(f) Emergency procedures.

(1) Whenever there is an imminent or actual emergency situation, the emergency coordinator, or his designee when the emergency coordinator is on call, shall immediately:

(i) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and

(ii) Notify appropriate State or local agencies with designated response roles if their help is needed.

(2) Whenever there is a release, fire, or explosion, the emergency coordinator shall immediately identify the character, exact source, amount, and areal extent of any released materials. The emergency coordinator may do this by observation or review of facility records or manifests and, if necessary, by chemical analysis.

(3) Concurrently, the emergency coordinator shall assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment shall consider both direct and indirect effects of the release, fire, or explosion, e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-offs from water or chemical agents used to control fire and heat-induced explosions.

(4) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he shall report his findings as follows:

(i) If his assessment indicates that evacuation of local areas may be advisable, the emergency coordinator shall immediately notify appropriate local authorities. The emergency coordinator shall be available to help appropriate officials decide whether local areas should be evacuated; and

(ii) The emergency coordinator shall immediately notify the Utah Department of Environmental Quality 24 hour answering service at 801/536-4123, and the National Response Center, using their 24-hour toll free number 800/424-8802. The report shall include:

(A) Name and telephone number of reporter;

(B) Name and address of facility;

(C) Time and type of incident, e.g., release, fire;

(D) Name and quantity of material(s) involved, to the extent known;

(E) The extent of injuries, if any; and

(F) The possible hazards to human health, or the environment, outside the facility.

(5) During an emergency, the emergency coordinator shall take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous secondary material at the facility. These measures shall include, where applicable, stopping processes and operations, collecting and containing released material, and removing or isolating containers.

(6) If the facility stops operations in response to a fire, explosion or release, the emergency coordinator shall monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

(7) Immediately after an emergency, the emergency coordinator shall provide for treating, storing, or disposing of recovered secondary material, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility. Unless the hazardous secondary material generator can demonstrate, in accordance with Subsections R315-261-3(c) or (d), that the recovered material

is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and shall manage it in accordance with all applicable requirements of Rules R315-262, 263, and 265.

(8) The emergency coordinator shall ensure that, in the affected area(s) of the facility:

(i) No secondary material that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and

(ii) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

(9) The hazardous secondary material generator shall note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, he shall submit a written report on the incident to the Director. The report shall include:

(i) Name, address, and telephone number of the hazardous secondary material generator;

(ii) Name, address, and telephone number of the facility;

(iii) Date, time, and type of incident, e.g., fire, explosion;

(iv) Name and quantity of material(s) involved;

(v) The extent of injuries, if any;

(vi) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and

(vii) Estimated quantity and disposition of recovered material that resulted from the incident.

R315-261-1030. Air Emission Standards for Process Vents - Applicability.

The regulations in Sections R315-261-1030 through 1035 apply to process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or stream stripping operations that manage hazardous secondary materials excluded under the remanufacturing exclusion at Subsection R315-261-4(a)(27) with concentrations of at least 10 ppmw, unless the process vents are equipped with operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63.

R315-261-1031. Air Emission Standards for Process Vents - Definitions.

(a) As used in Sections R315-261-1030 through 1035, all terms not defined herein shall have the meaning given them in the Resource Conservation and Recovery Act, the Utah Solid and Hazardous Waste Act, and Rules R315-260 through 266.

(1) "Air stripping operation" is a desorption operation employed to transfer one or more volatile components from a liquid mixture into a gas either with or without the application of heat to the liquid. Packed towers, spray towers, and bubble-cap, sieve, or valve-type plate towers are among the process configurations used for contacting the air and a liquid.

(2) "Bottoms receiver" means a container or tank used to receive and collect the heavier bottoms fractions of the distillation feed stream that remain in the liquid phase.

(3) "Closed-vent system" means a system that is not open to the atmosphere and that is composed of piping, connections, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device.

(4) "Condenser" means a heat-transfer device that reduces a thermodynamic fluid from its vapor phase to its liquid phase.

(5) "Connector" means flanged, screwed, welded, or other joined fittings used to connect two pipelines or a pipeline and a piece of equipment. For the purposes of reporting and recordkeeping, connector means flanged fittings that are not covered by insulation or other materials that prevent location of the fittings.

(6) "Continuous recorder" means a data-recording device

recording an instantaneous data value at least once every 15 minutes.

(7) "Control device" means an enclosed combustion device, vapor recovery system, or flare. Any device the primary function of which is the recovery or capture of solvents or other organics for use, reuse, or sale, e.g., a primary condenser on a solvent recovery unit, is not a control device.

(8) "Control device shutdown" means the cessation of operation of a control device for any purpose.

(9) "Distillate receiver" means a container or tank used to receive and collect liquid material, condensed, from the overhead condenser of a distillation unit and from which the condensed liquid is pumped to larger storage tanks or other process units.

(10) "Distillation operation" means an operation, either batch or continuous, separating one or more feed stream(s) into two or more exit streams, each exit stream having component concentrations different from those in the feed stream(s). The separation is achieved by the redistribution of the components between the liquid and vapor phase as they approach equilibrium within the distillation unit.

(11) "Double block and bleed system" means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

(12) "Equipment" means each valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, or flange or other connector, and any control devices or systems required by Sections R315-261-1030 through 1035.

(13) "Flame zone" means the portion of the combustion chamber in a boiler occupied by the flame envelope.

(14) "Flow indicator" means a device that indicates whether gas flow is present in a vent stream.

(15) "First attempt at repair" means to take rapid action for the purpose of stopping or reducing leakage of organic material to the atmosphere using best practices.

(16) "Fractionation operation" means a distillation operation or method used to separate a mixture of several volatile components of different boiling points in successive stages, each stage removing from the mixture some proportion of one of the components.

(17) "Hazardous secondary material management unit shutdown" means a work practice or operational procedure that stops operation of a hazardous secondary material management unit or part of a hazardous secondary material management unit. An unscheduled work practice or operational procedure that stops operation of a hazardous secondary material management unit or part of a hazardous secondary material management unit for less than 24 hours is not a hazardous secondary material management unit shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping operation are not hazardous secondary material management unit shutdowns.

(18) "Hot well" means a container for collecting condensate as in a steam condenser serving a vacuum-jet or steam-jet ejector.

(19) "In gas/vapor service" means that the piece of equipment contains or contacts a hazardous secondary material stream that is in the gaseous state at operating conditions.

(20) "In heavy liquid service" means that the piece of equipment is not in gas/vapor service or in light liquid service.

(21) "In light liquid service" means that the piece of equipment contains or contacts a material stream where the vapor pressure of one or more of the organic components in the stream is greater than 0.3 kilopascals (kPa) at 20 degrees C, the total concentration of the pure organic components having a vapor pressure greater than 0.3 kilopascals (kPa) at 20 degrees C is equal to or greater than 20 percent by weight, and the fluid is a liquid at operating conditions.

(22) "In situ sampling systems" means nonextractive samplers or in-line samplers.

(23) "In vacuum service" means that equipment is operating at an internal pressure that is at least 5 kPa below ambient pressure.

(24) "Malfunction" means any sudden failure of a control device or a hazardous secondary material management unit or failure of a hazardous secondary material management unit to operate in a normal or usual manner, so that organic emissions are increased.

(25) "Open-ended valve or line" means any valve, except pressure relief valves, having one side of the valve seat in contact with hazardous secondary material and one side open to the atmosphere, either directly or through open piping.

(26) "Pressure release" means the emission of materials resulting from the system pressure being greater than the set pressure of the pressure relief device.

(27) "Process heater" means a device that transfers heat liberated by burning fuel to fluids contained in tubes, including all fluids except water that are heated to produce steam.

(28) "Process vent" means any open-ended pipe or stack that is vented to the atmosphere either directly, through a vacuum-producing system, or through a tank, e.g., distillate receiver, condenser, bottoms receiver, surge control tank, separator tank, or hot well, associated with hazardous secondary material distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations.

(29) "Repaired" means that equipment is adjusted, or otherwise altered, to eliminate a leak.

(30) "Sampling connection system" means an assembly of equipment within a process or material management unit used during periods of representative operation to take samples of the process or material fluid. Equipment used to take non-routine grab samples is not considered a sampling connection system.

(31) "Sensor" means a device that measures a physical quantity or the change in a physical quantity, such as temperature, pressure, flow rate, pH, or liquid level.

(32) "Separator tank" means a device used for separation of two immiscible liquids.

(33) "Solvent extraction operation" means an operation or method of separation in which a solid or solution is contacted with a liquid solvent, the two being mutually insoluble, to preferentially dissolve and transfer one or more components into the solvent.

(34) "Startup" means the setting in operation of a hazardous secondary material management unit or control device for any purpose.

(35) "Steam stripping operation" means a distillation operation in which vaporization of the volatile constituents of a liquid mixture takes place by the introduction of steam directly into the charge.

(36) "Surge control tank" means a large-sized pipe or storage reservoir sufficient to contain the surging liquid discharge of the process tank to which it is connected.

(37) "Thin-film evaporation operation" means a distillation operation that employs a heating surface consisting of a large diameter tube that may be either straight or tapered, horizontal or vertical. Liquid is spread on the tube wall by a rotating assembly of blades that maintain a close clearance from the wall or actually ride on the film of liquid on the wall.

(38) "Vapor incinerator" means any enclosed combustion device that is used for destroying organic compounds and does not extract energy in the form of steam or process heat.

(39) "Vented" means discharged through an opening, typically an open-ended pipe or stack, allowing the passage of a stream of liquids, gases, or fumes into the atmosphere. The passage of liquids, gases, or fumes is caused by mechanical means such as compressors or vacuum-producing systems or by process-related means such as evaporation produced by heating

and not caused by tank loading and unloading, working losses, or by natural" means such as diurnal temperature changes.

R315-261-1032. Air Emission Standards for Process Vents - Process Vents.

(a) The remanufacturer or other person that stores or treats hazardous secondary materials in hazardous secondary material management units with process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations managing hazardous secondary material with organic concentrations of at least 10 ppmw shall either:

(1) Reduce total organic emissions from all affected process vents at the facility below 1.4 kg/h (3 lb/h) and 2.8 Mg/yr (3.1 tons/yr), or

(2) Reduce, by use of a control device, total organic emissions from all affected process vents at the facility by 95 weight percent.

(b) If the remanufacturer or other person that stores or treats the hazardous secondary material installs a closed-vent system and control device to comply with the provisions of Subsection R315-261-1032(a) the closed-vent system and control device shall meet the requirements of Section R315-261-1033.

(c) Determinations of vent emissions and emission reductions or total organic compound concentrations achieved by add-on control devices may be based on engineering calculations or performance tests. If performance tests are used to determine vent emissions, emission reductions, or total organic compound concentrations achieved by add-on control devices, the performance tests shall conform with the requirements of Subsection R315-261-1034(c).

(d) When a remanufacturer or other person that stores or treats the hazardous secondary material and the Director do not agree on determinations of vent emissions and/or emission reductions or total organic compound concentrations achieved by add-on control devices based on engineering calculations, the procedures in Subsection R315-261-1034(c) shall be used to resolve the disagreement.

R315-261-1033. Air Emission Standards for Process Vents - Closed-Vent Systems and Control Devices.

(a)(1) The remanufacturer or other person that stores or treats the hazardous secondary materials in hazardous secondary material management units using closed-vent systems and control devices used to comply with provisions of Rule R315-261 shall comply with the provisions of Sections R315-261-1033.

(2) Reserved

(b) A control device involving vapor recovery, e.g., a condenser or adsorber, shall be designed and operated to recover the organic vapors vented to it with an efficiency of 95 weight percent or greater unless the total organic emission limits of Subsection R315-261-1032(a)(1) for all affected process vents can be attained at an efficiency less than 95 weight percent.

(c) An enclosed combustion device, e.g., a vapor incinerator, boiler, or process heater, shall be designed and operated to reduce the organic emissions vented to it by 95 weight percent or greater; to achieve a total organic compound concentration of 20 ppmv, expressed as the sum of the actual compounds, not carbon equivalents, on a dry basis corrected to 3 percent oxygen; or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760 deg. C. If a boiler or process heater is used as the control device, then the vent stream shall be introduced into the flame zone of the boiler or process heater.

(d)(1) A flare shall be designed for and operated with no visible emissions as determined by the methods specified in

Subsection R315-261-1033(e)(1), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

(2) A flare shall be operated with a flame present at all times, as determined by the methods specified in Subsection R315-261-1033(f)(2)(iii).

(3) A flare shall be used only if the net heating value of the gas being combusted is 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or if the net heating value of the gas being combusted is 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in Subsection R315-261-1033(e)(2).

(4)(i) A steam-assisted or nonassisted flare shall be designed for and operated with an exit velocity, as determined by the methods specified in Subsection R315-261-1033(e)(3), less than 18.3 m/s (60 ft/s), except as provided in Subsections R315-261-1033(d)(4)(ii) and (iii).

(ii) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in Subsection R315-261-1033(e)(3), equal to or greater than 18.3 m/s (60 ft/s) but less than 122 m/s (400 ft/s) is allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in Subsection R315-261-1033(e)(3), less than the velocity, V_{max} , as determined by the method specified in Subsection R315-261-1033(e)(4) and less than 122 m/s (400 ft/s) is allowed.

(5) An air-assisted flare shall be designed and operated with an exit velocity less than the velocity, V_{max} , as determined by the method specified in Subsection R315-261-1033(e)(5).

(6) A flare used to comply with Section R315-261-1033 shall be steam-assisted, air-assisted, or nonassisted.

(e)(1) Reference Method 22 in 40 CFR part 60 shall be used to determine the compliance of a flare with the visible emission provisions of Sections R315-261-1030 through 1035. The observation period is 2 hours and shall be used according to Method 22.

(2) The net heating value of the gas being combusted in a flare shall be calculated using the following equation: The equation found in 40 CFR 261.1033(e)(2) 2015 ed is adopted and incorporated by reference.

Where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 degrees C and 760 mm Hg, but the standard temperature for determining the volume corresponding to 1 mol is 20 degrees C;

K = Constant, 1.74×10^{-7} (1/ppm) (g mol/scm) (MJ/kcal) where standard temperature for (g mol/scm) is 20 deg. C;

C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 in 40 CFR part 60 and measured for hydrogen and carbon monoxide by ASTM D 1946-82, incorporated by reference as specified in Section R315-260-11; and

H_i = Net heat of combustion of sample component i , kcal/9 mol at 25 degrees C and 760 mm Hg. The heats of combustion may be determined using ASTM D 2382-83, incorporated by reference as specified in Section R315-260-11, if published values are not available or cannot be calculated.

(3) The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate, in units of standard temperature and pressure, as determined by Reference Methods 2, 2A, 2C, or 2D in 40 CFR part 60 as appropriate, by the unobstructed, free, cross-sectional area of the flare tip.

(4) The maximum allowed velocity in m/s, V_{max} , for a flare complying with Subsection R315-261-1033(d)(4)(iii) shall be determined by the following equation:

$$\text{Log}_{10}(V_{max}) = (H_T + 28.8)/31.7$$

Where:

28.8 = Constant,

31.7 = Constant,

H_T = The net heating value as determined in Subsection R315-261-1033(e)(2).

(5) The maximum allowed velocity in m/s, V_{max} , for an air-assisted flare shall be determined by the following equation:

$$V_{max} = 8.706 + 0.7084 (H_T)$$

Where:

8.706 = Constant,

0.7084 = Constant,

H_T = The net heating value as determined in Subsection R315-261-1033(e)(2).

(f) The remanufacturer or other person that stores or treats the hazardous secondary material shall monitor and inspect each control device required to comply with Section R315-261-1033 to ensure proper operation and maintenance of the control device by implementing the following requirements:

(1) Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow indicator that provides a record of vent stream flow from each affected process vent to the control device at least once every hour. The flow indicator sensor shall be installed in the vent stream at the nearest feasible point to the control device inlet but before the point at which the vent streams are combined.

(2) Install, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor control device operation as specified below:

(i) For a thermal vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of plus/minus 1 percent of the temperature being monitored in degrees C or plus/minus 0.5 degrees C, whichever is greater. The temperature sensor shall be installed at a location in the combustion chamber downstream of the combustion zone.

(ii) For a catalytic vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature at two locations and have an accuracy of plus/minus 1 percent of the temperature being monitored in degrees C or plus/minus 0.5 degrees C, whichever is greater. One temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed inlet and a second temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed outlet.

(iii) For a flare, a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame.

(iv) For a boiler or process heater having a design heat input capacity less than 44 MW, a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of plus/minus 1 percent of the temperature being monitored in degrees C or plus/minus 0.5 degrees C, whichever is greater. The temperature sensor shall be installed at a location in the furnace downstream of the combustion zone.

(v) For a boiler or process heater having a design heat input capacity greater than or equal to 44 MW, a monitoring device equipped with a continuous recorder to measure a parameter(s) that indicates good combustion operating practices are being used.

(vi) For a condenser, either:

(A) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the condenser, or

(B) A temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature with an accuracy of plus/minus 1 percent of the temperature being monitored in degrees Celsius (deg. C) or plus/minus 0.5 deg. C, whichever is greater. The temperature

sensor shall be installed at a location in the exhaust vent stream from the condenser exit, i.e., product side.

(vii) For a carbon adsorption system that regenerates the carbon bed directly in the control device such as a fixed-bed carbon adsorber, either:

(A) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the carbon bed, or

(B) A monitoring device equipped with a continuous recorder to measure a parameter that indicates the carbon bed is regenerated on a regular, predetermined time cycle.

(3) Inspect the readings from each monitoring device required by Subsections R315-261-1033(f)(1) and (2) at least once each operating day to check control device operation and, if necessary, immediately implement the corrective measures necessary to ensure the control device operates in compliance with the requirements of Section R315-261-1033.

(g) A remanufacturer or other person that stores or treats hazardous secondary material in a hazardous secondary material management unit using a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device shall replace the existing carbon in the control device with fresh carbon at a regular, predetermined time interval that is no longer than the carbon service life established as a requirement of Subsection R315-261-1035(b)(4)(iii)(F).

(h) A remanufacturer or other person that stores or treats hazardous secondary material in a hazardous secondary material management unit using a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device shall replace the existing carbon in the control device with fresh carbon on a regular basis by using one of the following procedures:

(1) Monitor the concentration level of the organic compounds in the exhaust vent stream from the carbon adsorption system on a regular schedule, and replace the existing carbon with fresh carbon immediately when carbon breakthrough is indicated. The monitoring frequency shall be daily or at an interval no greater than 20 percent of the time required to consume the total carbon working capacity established as a requirement of Subsection R315-261-1035(b)(4)(iii)(G), whichever is longer.

(2) Replace the existing carbon with fresh carbon at a regular, predetermined time interval that is less than the design carbon replacement interval established as a requirement of Subsection R315-261-1035(b)(4)(iii)(G).

(i) An alternative operational or process parameter may be monitored if it can be demonstrated that another parameter shall ensure that the control device is operated in conformance with these standards and the control device's design specifications.

(j) A remanufacturer or other person that stores or treats hazardous secondary material at an affected facility seeking to comply with the provisions of Rule R315-261 by using a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system is required to develop documentation including sufficient information to describe the control device operation and identify the process parameter or parameters that indicate proper operation and maintenance of the control device.

(k) A closed-vent system shall meet either of the following design requirements:

(1) A closed-vent system shall be designed to operate with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background as determined by the procedure in Subsection R315-261-1034(b), and by visual inspections; or

(2) A closed-vent system shall be designed to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gauge or other pressure

measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating.

(l) The remanufacturer or other person that stores or treats the hazardous secondary material shall monitor and inspect each closed-vent system required to comply with Section R315-261-1033 to ensure proper operation and maintenance of the closed-vent system by implementing the following requirements:

(1) Each closed-vent system that is used to comply with Subsection R315-261-1033(k)(1) shall be inspected and monitored in accordance with the following requirements:

(i) An initial leak detection monitoring of the closed-vent system shall be conducted by the remanufacturer or other person that stores or treats the hazardous secondary material on or before the date that the system becomes subject to Section R315-261-1033. The remanufacturer or other person that stores or treats the hazardous secondary material shall monitor the closed-vent system components and connections using the procedures specified in Subsection R315-261-1034(b) to demonstrate that the closed-vent system operates with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background.

(ii) After initial leak detection monitoring required in Subsection R315-261-1033(l)(1)(i), the remanufacturer or other person that stores or treats the hazardous secondary material shall inspect and monitor the closed-vent system as follows:

(A) Closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed, e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange, shall be visually inspected at least once per year to check for defects that could result in air pollutant emissions. The remanufacturer or other person that stores or treats the hazardous secondary material shall monitor a component or connection using the procedures specified in Subsection R315-261-1034(b) to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced, e.g., a section of damaged hard piping is replaced with new hard piping, or the connection is unsealed, e.g., a flange is unbolted.

(B) Closed-vent system components or connections other than those specified in Subsection R315-261-1033(l)(1)(ii)(A) shall be monitored annually and at other times as requested by the Director, except as provided for in Subsection R315-261-1033(o), using the procedures specified in Subsection R315-261-1034(b) to demonstrate that the components or connections operate with no detectable emissions.

(iii) In the event that a defect or leak is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect or leak in accordance with the requirements of Subsection R315-261-1033(l)(3).

(iv) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection and monitoring in accordance with the requirements specified in Section R315-261-1035.

(2) Each closed-vent system that is used to comply with Subsection R315-261-1033(k)(2) shall be inspected and monitored in accordance with the following requirements:

(i) The closed-vent system shall be visually inspected by the remanufacturer or other person that stores or treats the hazardous secondary material to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork or piping or loose connections.

(ii) The remanufacturer or other person that stores or treats the hazardous secondary material shall perform an initial inspection of the closed-vent system on or before the date that the system becomes subject to Section R315-261-1033. Thereafter, the remanufacturer or other person that stores or

treats the hazardous secondary material shall perform the inspections at least once every year.

(iii) In the event that a defect or leak is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of Subsection R315-261-1033(l)(3).

(iv) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection and monitoring in accordance with the requirements specified in Section R315-261-1035.

(3) The remanufacturer or other person that stores or treats the hazardous secondary material shall repair all detected defects as follows:

(i) Detectable emissions, as indicated by visual inspection, or by an instrument reading greater than 500 ppmv above background, shall be controlled as soon as practicable, but not later than 15 calendar days after the emission is detected, except as provided for in Subsection R315-261-1033(l)(3)(iii).

(ii) A first attempt at repair shall be made no later than 5 calendar days after the emission is detected.

(iii) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown, or if the remanufacturer or other person that stores or treats the hazardous secondary material determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be completed by the end of the next process unit shutdown.

(iv) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the defect repair in accordance with the requirements specified in Section R315-261-1035.

(m) Closed-vent systems and control devices used to comply with provisions of Sections R315-261-1030 through 1035 shall be operated at all times when emissions may be vented to them.

(n) The owner or operator using a carbon adsorption system to control air pollutant emissions shall document that all carbon that is a hazardous waste and that is removed from the control device is managed in one of the following manners, regardless of the average volatile organic concentration of the carbon:

(1) Regenerated or reactivated in a thermal treatment unit that meets one of the following:

(i) The owner or operator of the unit has been issued a final permit under Rule R315-270 which implements the requirements of Sections R315-264-600 through 603; or

(ii) The unit is equipped with and operating air emission controls in accordance with the applicable requirements of Sections R315-261-1030 through 1035 and 1080 through 1089 or subparts AA and CC of 40 CFR 265 which is incorporated in R315-265; or

(iii) The unit is equipped with and operating air emission controls in accordance with a national emission standard for hazardous air pollutants under 40 CFR part 61 or 40 CFR part 63.

(2) Incinerated in a hazardous waste incinerator for which the owner or operator either:

(i) Has been issued a final permit under Rule R315-270 which implements the requirements of Sections R315-264-340 through 351; or

(ii) Has designed and operates the incinerator in accordance with the interim status requirements of 40 CFR part 265, subpart O, which is incorporated by Rule R315-265.

(3) Burned in a boiler or industrial furnace for which the owner or operator either:

(i) Has been issued a final permit under Rule R315-270

which implements the requirements of Sections R315-266-100 through 112; or

(ii) Has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of Sections R315-266-100 through 112.

(o) Any components of a closed-vent system that are designated, as described in Subsection R315-261-1035(c)(9), as unsafe to monitor are exempt from the requirements of Subsection R315-261-1033(l)(1)(ii)(B) if:

(1) The remanufacturer or other person that stores or treats the hazardous secondary material in a hazardous secondary material management unit using a closed-vent system determines that the components of the closed-vent system are unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with Subsection R315-261-1033(l)(1)(ii)(B); and

(2) The remanufacturer or other person that stores or treats the hazardous secondary material in a hazardous secondary material management unit using a closed-vent system adheres to a written plan that requires monitoring the closed-vent system components using the procedure specified in Subsection R315-261-1033(l)(1)(ii)(B) as frequently as practicable during safe-to-monitor times.

R315-261-1034. Air Emission Standards for Process Vents - Test Methods and Procedures.

(a) Each remanufacturer or other person that stores or treats the hazardous secondary material subject to the provisions of Sections R315-261-1030 through 1035 shall comply with the test methods and procedural requirements provided in Section R315-261-1034.

(b) When a closed-vent system is tested for compliance with no detectable emissions, as required in Subsection R315-261-1033(l), the test shall comply with the following requirements:

(1) Monitoring shall comply with Reference Method 21 in 40 CFR part 60.

(2) The detection instrument shall meet the performance criteria of Reference Method 21.

(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21.

(4) Calibration gases shall be:

(i) Zero air, less than 10 ppm of hydrocarbon in air.

(ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.

(5) The background level shall be determined as set forth in Reference Method 21.

(6) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

(7) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(c) Performance tests to determine compliance with Subsection R315-261-1032(a) and with the total organic compound concentration limit of Subsection R315-261-1033(c) shall comply with the following:

(1) Performance tests to determine total organic compound concentrations and mass flow rates entering and exiting control devices shall be conducted and data reduced in accordance with the following reference methods and calculation procedures:

(i) Method 2 in 40 CFR part 60 for velocity and volumetric flow rate.

(ii) Method 18 or Method 25A in 40 CFR part 60, appendix A, for organic content. If Method 25A is used, the organic HAP used as the calibration gas shall be the single organic HAP representing the largest percent by volume of the

emissions. The use of Method 25A is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.

(iii) Each performance test shall consist of three separate runs; each run conducted for at least 1 hour under the conditions that exist when the hazardous secondary material management unit is operating at the highest load or capacity level reasonably expected to occur. For the purpose of determining total organic compound concentrations and mass flow rates, the average of results of all runs shall apply. The average shall be computed on a time-weighted basis.

(iv) Total organic mass flow rates shall be determined by the following equation:

(A) For sources utilizing Method 18.

The equation found in 40 CFR 261.1034(c)(1)(iv)(A), 2015 ed. is adopted and incorporated by reference

Where:

E_t = Total organic mass flow rate, kg/h;

Q_{2sd} = Volumetric flow rate of gases entering or exiting control device, as determined by Method 2, dscm/h;

n = Number of organic compounds in the vent gas;

C_i = Organic concentration in ppm, dry basis, of compound i in the vent gas, as determined by Method 18;

MW_i = Molecular weight of organic compound i in the vent gas, kg/kg-mol;

0.0416 = Conversion factor for molar volume, kg-mol/m³ (at 293 K and 760 mm Hg);

10^{-6} = Conversion from ppm

(B) For sources utilizing Method 25A.

$E_t = (Q)(C)(MW)(0.0416)(10^{-6})$

Where:

E_t = Total organic mass flow rate, kg/h;

Q = Volumetric flow rate of gases entering or exiting control device, as determined by Method 2, dscm/h;

C = Organic concentration in ppm, dry basis, as determined by Method 25A;

MW = Molecular weight of propane, 44;

0.0416 = Conversion factor for molar volume, kg-mol/m³ (at 293 K and 760 mm Hg);

10^{-6} = Conversion from ppm.

(v) The annual total organic emission rate shall be determined by the following equation:

$E_A = (E_t)(H)$

Where:

E_A = Total organic mass emission rate, kg/y;

E_t = Total organic mass flow rate for the process vent, kg/h;

H = Total annual hours of operations for the affected unit, h.

(vi) Total organic emissions from all affected process vents at the facility shall be determined by summing the hourly total organic mass emission rates, $E_{t,i}$, as determined in Subsection R315-261-1034(c)(1)(iv), and by summing the annual total organic mass emission rates, $E_{A,i}$, as determined in Subsection R315-261-1034(c)(1)(v), for all affected process vents at the facility.

(2) The remanufacturer or other person that stores or treats the hazardous secondary material shall record such process information as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

(3) The remanufacturer or other person that stores or treats the hazardous secondary material at an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(i) Sampling ports adequate for the test methods specified in Subsection R315-261-1034(c)(1).

(ii) Safe sampling platform(s).

(iii) Safe access to sampling platform(s).

(iv) Utilities for sampling and testing equipment.

(4) For the purpose of making compliance determinations, the time-weighted average of the results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs shall be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the remanufacturer's or other person's that stores or treats the hazardous secondary material control, compliance may, upon the Director's approval, be determined using the average of the results of the two other runs.

(d) To show that a process vent associated with a hazardous secondary material distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation is not subject to the requirements of Sections R315-261-1030 through 1035, the remanufacturer or other person that stores or treats the hazardous secondary material shall make an initial determination that the time-weighted, annual average total organic concentration of the material managed by the hazardous secondary material management unit is less than 10 ppmw using one of the following two methods:

(1) Direct measurement of the organic concentration of the material using the following procedures:

(i) The remanufacturer or other person that stores or treats the hazardous secondary material shall take a minimum of four grab samples of material for each material stream managed in the affected unit under process conditions expected to cause the maximum material organic concentration.

(ii) For material generated onsite, the grab samples shall be collected at a point before the material is exposed to the atmosphere such as in an enclosed pipe or other closed system that is used to transfer the material after generation to the first affected distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation. For material generated offsite, the grab samples shall be collected at the inlet to the first material management unit that receives the material provided the material has been transferred to the facility in a closed system such as a tank truck and the material is not diluted or mixed with other material.

(iii) Each sample shall be analyzed and the total organic concentration of the sample shall be computed using Method 9060A, incorporated by reference under Section R315-260-11, of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, or analyzed for its individual organic constituents.

(iv) The arithmetic mean of the results of the analyses of the four samples shall apply for each material stream managed in the unit in determining the time-weighted, annual average total organic concentration of the material. The time-weighted average is to be calculated using the annual quantity of each material stream processed and the mean organic concentration of each material stream managed in the unit.

(2) Using knowledge of the material to determine that its total organic concentration is less than 10 ppmw. Documentation of the material determination is required. Examples of documentation that shall be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the material is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct measurement to generate a material stream having a total organic content less than 10 ppmw, or prior speciation analysis results on the same material stream where it can also be documented that no process changes have occurred since that analysis that could affect the material total organic concentration.

(e) The determination that distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping

operations manage hazardous secondary materials with time-weighted, annual average total organic concentrations less than 10 ppmw shall be made as follows:

- (1) By the effective date that the facility becomes subject to the provisions of Sections R315-261-1030 through 1035 or by the date when the material is first managed in a hazardous secondary material management unit, whichever is later, and
- (2) For continuously generated material, annually, or
- (3) Whenever there is a change in the material being managed or a change in the process that generates or treats the material.

(f) When a remanufacturer or other person that stores or treats the hazardous secondary material and the Director do not agree on whether a distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation manages a hazardous secondary material with organic concentrations of at least 10 ppmw based on knowledge of the material, the dispute may be resolved by using direct measurement as specified at Subsection R315-261-1034(d)(1).

R315-261-1035. Air Emission Standards for Process Vents - Recordkeeping Requirements.

(a)(1) Each remanufacturer or other person that stores or treats the hazardous secondary material subject to the provisions of Sections R315-261-1030 through 1035 shall comply with the recordkeeping requirements of Section R315-261-1035.

(2) A remanufacturer or other person that stores or treats the hazardous secondary material of more than one hazardous secondary material management unit subject to the provisions of Sections R315-261-1030 through 1035 may comply with the recordkeeping requirements for these hazardous secondary material management units in one recordkeeping system if the system identifies each record by each hazardous secondary material management unit.

(b) The remanufacturer or other person that stores or treats the hazardous secondary material shall keep the following records on-site:

(1) For facilities that comply with the provisions of Subsection R315-261-1033(a)(2), an implementation schedule that includes dates by which the closed-vent system and control device shall be installed and in operation. The schedule shall also include a rationale of why the installation cannot be completed at an earlier date. The implementation schedule shall be kept on-site at the facility by the effective date that the facility becomes subject to the provisions of Sections R315-261-1030 through 1035.

(2) Up-to-date documentation of compliance with the process vent standards in Subsection R315-261-1032, including:

(i) Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility, i.e., the total emissions for all affected vents at the facility, and the approximate location within the facility of each affected unit, e.g., identify the hazardous secondary material management units on a facility plot plan.

(ii) Information and data supporting determinations of vent emissions and emission reductions achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, determinations of vent emissions and emission reductions shall be made using operating parameter values, e.g., temperatures, flow rates, or vent stream organic compounds and concentrations, that represent the conditions that result in maximum organic emissions, such as when the hazardous secondary material management unit is operating at the highest load or capacity level reasonably expected to occur. If the remanufacturer or other person that stores or treats the hazardous secondary material takes any action, e.g., managing a material of different composition or increasing operating hours of affected hazardous

secondary material management units, that would result in an increase in total organic emissions from affected process vents at the facility, then a new determination is required.

(3) Where a remanufacturer or other person that stores or treats the hazardous secondary material chooses to use test data to determine the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan shall be developed and include:

(i) A description of how it is determined that the planned test is going to be conducted when the hazardous secondary material management unit is operating at the highest load or capacity level reasonably expected to occur. This shall include the estimated or design flow rate and organic content of each vent stream and define the acceptable operating ranges of key process and control device parameters during the test program.

(ii) A detailed engineering description of the closed-vent system and control device including:

(A) Manufacturer's name and model number of control device.

(B) Type of control device.

(C) Dimensions of the control device.

(D) Capacity.

(E) Construction materials.

(iii) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

(4) Documentation of compliance with Subsection R315-261-1033 shall include the following information:

(i) A list of all information references and sources used in preparing the documentation.

(ii) Records, including the dates, of each compliance test required by Subsection R315-261-1033(k).

(iii) If engineering calculations are used, a design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions," incorporated by reference as specified in R315-260-11, or other engineering texts acceptable to the Director that present basic control device design information. Documentation provided by the control device manufacturer or vendor that describes the control device design in accordance with Subsections R315-261-1035(b)(4)(iii)(A) through (G) may be used to comply with this requirement. The design analysis shall address the vent stream characteristics and control device operation parameters as specified below.

(A) For a thermal vapor incinerator, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.

(B) For a catalytic vapor incinerator, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

(C) For a boiler or process heater, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average flame zone temperatures, combustion zone residence time, and description of method and location where the vent stream is introduced into the combustion zone.

(D) For a flare, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also consider the requirements specified in Subsection R315-261-1033(d).

(E) For a condenser, the design analysis shall consider the

vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design outlet organic compound concentration level, design average temperature of the condenser exhaust vent stream, and design average temperatures of the coolant fluid at the condenser inlet and outlet.

(F) For a carbon adsorption system such as a fixed-bed adsorber that regenerates the carbon bed directly onsite in the control device, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design exhaust vent stream organic compound concentration level, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total steam flow over the period of each complete carbon bed regeneration cycle, duration of the carbon bed steaming and cooling/drying cycles, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon.

(G) For a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design outlet organic concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.

(iv) A statement signed and dated by the remanufacturer or other person that stores or treats the hazardous secondary material certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous secondary material management unit is or would be operating at the highest load or capacity level reasonably expected to occur.

(v) A statement signed and dated by the remanufacturer or other person that stores or treats the hazardous secondary material certifying that the control device is designed to operate at an efficiency of 95 percent or greater unless the total organic concentration limit of Subsection R315-261-1032(a) is achieved at an efficiency less than 95 weight percent or the total organic emission limits of Subsection R315-261-1032(a) for affected process vents at the facility can be attained by a control device involving vapor recovery at an efficiency less than 95 weight percent. A statement provided by the control device manufacturer or vendor certifying that the control equipment meets the design specifications may be used to comply with this requirement.

(vi) If performance tests are used to demonstrate compliance, all test results.

(c) Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of Rule R315-261 shall be recorded and kept up-to-date at the facility. The information shall include:

(1) Description and date of each modification that is made to the closed-vent system or control device design.

(2) Identification of operating parameter, description of monitoring device, and diagram of monitoring sensor location or locations used to comply with Subsections R315-261-1033(f)(1) and (2).

(3) Monitoring, operating, and inspection information required by Subsections R315-261-1033(f) through (k).

(4) Date, time, and duration of each period that occurs while the control device is operating when any monitored parameter exceeds the value established in the control device design analysis as specified below:

(i) For a thermal vapor incinerator designed to operate

with a minimum residence time of 0.50 second at a minimum temperature of 760 deg. C, period when the combustion temperature is below 760 deg. C.

(ii) For a thermal vapor incinerator designed to operate with an organic emission reduction efficiency of 95 weight percent or greater, period when the combustion zone temperature is more than 28 degrees C below the design average combustion zone temperature established as a requirement of Subsection R315-261-1035(b)(4)(iii)(A).

(iii) For a catalytic vapor incinerator, period when:

(A) Temperature of the vent stream at the catalyst bed inlet is more than 28 degrees C below the average temperature of the inlet vent stream established as a requirement of Subsection R315-261-1035(b)(4)(iii)(B), or

(B) Temperature difference across the catalyst bed is less than 80 percent of the design average temperature difference established as a requirement of Subsection R315-261-1035(b)(4)(iii)(B).

(iv) For a boiler or process heater, period when:

(A) Flame zone temperature is more than 28 degrees C below the design average flame zone temperature established as a requirement of Subsection R315-261-1035(b)(4)(iii)(C), or

(B) Position changes where the vent stream is introduced to the combustion zone from the location established as a requirement of Subsection R315-261-1035(b)(4)(iii)(C).

(v) For a flare, period when the pilot flame is not ignited.

(vi) For a condenser that complies with Subsection R315-261-1033(f)(2)(vi)(A), period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the condenser are more than 20 percent greater than the design outlet organic compound concentration level established as a requirement of Subsection R315-261-1035(b)(4)(iii)(E).

(vii) For a condenser that complies with Subsection R315-261-1033(f)(2)(vi)(B), period when:

(A) Temperature of the exhaust vent stream from the condenser is more than 6 degrees C above the design average exhaust vent stream temperature established as a requirement of Subsection R315-261-1035(b)(4)(iii)(E); or

(B) Temperature of the coolant fluid exiting the condenser is more than 6 degrees C above the design average coolant fluid temperature at the condenser outlet established as a requirement of Subsection R315-261-1035(b)(4)(iii)(E).

(viii) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly on-site in the control device and complies with Subsection R315-261-1033(f)(2)(vii)(A), period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the carbon bed are more than 20 percent greater than the design exhaust vent stream organic compound concentration level established as a requirement of Subsection R315-261-1035(b)(4)(iii)(F).

(ix) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly on-site in the control device and complies with Subsection R315-261-1033(f)(2)(vii)(B), period when the vent stream continues to flow through the control device beyond the predetermined carbon bed regeneration time established as a requirement of Subsection R315-261-1035(b)(4)(iii)(F).

(5) Explanation for each period recorded under Subsection R315-261-1035(c)(4) of the cause for control device operating parameter exceeding the design value and the measures implemented to correct the control device operation.

(6) For a carbon adsorption system operated subject to requirements specified in Subsections R315-261-1033(g) or (h)(2), date when existing carbon in the control device is replaced with fresh carbon.

(7) For a carbon adsorption system operated subject to requirements specified in Subsection R315-261-1033(h)(1), a

log that records:

(i) Date and time when control device is monitored for carbon breakthrough and the monitoring device reading.

(ii) Date when existing carbon in the control device is replaced with fresh carbon.

(8) Date of each control device startup and shutdown.

(9) A remanufacturer or other person that stores or treats the hazardous secondary material designating any components of a closed-vent system as unsafe to monitor pursuant to Subsection R315-261-1033(o) shall record in a log that is kept at the facility the identification of closed-vent system components that are designated as unsafe to monitor in accordance with the requirements of Subsection R315-261-1033(o), an explanation for each closed-vent system component stating why the closed-vent system component is unsafe to monitor, and the plan for monitoring each closed-vent system component.

(10) When each leak is detected as specified in Subsection R315-261-1033(l), the following information shall be recorded:

(i) The instrument identification number, the closed-vent system component identification number, and the operator name, initials, or identification number.

(ii) The date the leak was detected and the date of first attempt to repair the leak.

(iii) The date of successful repair of the leak.

(iv) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be nonrepairable.

(v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(A) The remanufacturer or other person that stores or treats the hazardous secondary material may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(B) If delay of repair was caused by depletion of stocked parts, there shall be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

(d) Records of the monitoring, operating, and inspection information required by Subsections R315-261-1035(c)(3) through (10) shall be maintained by the owner or operator for at least 3 years following the date of each occurrence, measurement, maintenance, corrective action, or record.

(e) For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the Director shall specify the appropriate recordkeeping requirements.

(f) Up-to-date information and data used to determine whether or not a process vent is subject to the requirements in Subsection R315-261-1032 including supporting documentation as required by Subsection R315-261-1034(d)(2) when application of the knowledge of the nature of the hazardous secondary material stream or the process by which it was produced is used, shall be recorded in a log that is kept at the facility.

R315-261-1050. Air Emission Standards for Equipment Leaks - Applicability.

(a) The regulations in Sections R315-261-1050 through 1064 apply to equipment that contains hazardous secondary materials excluded under the remanufacturing exclusion at Subsection R315-261-4(a)(27), unless the equipment operations are subject to the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63.

R315-261-1051. Air Emission Standards for Equipment

Leaks - Definitions.

As used in Sections R315-261-1050 through 1064, all terms shall have the meaning given them in Section R315-261-1031, the Resource Conservation and Recovery Act, the Utah Solid and Hazardous Waste Act, and Rules R315-260 through 266.

R315-261-1052. Air Emission Standards: Pumps in Light Liquid Service.

(a)(1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in Section R315-261-1063(b), except as provided in Subsections R315-261-1052(d), (e), and (f).

(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(b)(1) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(2) If there are indications of liquids dripping from the pump seal, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section R315-261-1059.

(2) A first attempt at repair, e.g., tightening the packing gland, shall be made no later than five calendar days after each leak is detected.

(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of Subsection R315-261-1052(a), provided the following requirements are met:

(1) Each dual mechanical seal system shall be:

(i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure, or

(ii) Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of Section R315-261-1060, or

(iii) Equipped with a system that purges the barrier fluid into a hazardous secondary material stream with no detectable emissions to the atmosphere.

(2) The barrier fluid system shall not be a hazardous secondary material with organic concentrations 10 percent or greater by weight.

(3) Each barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each pump shall be checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

(5)(i) Each sensor as described in Subsection R315-261-1052(d)(3) shall be checked daily or be equipped with an audible alarm that shall be checked monthly to ensure that it is functioning properly.

(ii) The remanufacturer or other person that stores or treats the hazardous secondary material shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(6)(i) If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in Subsection R315-261-1052(d)(5)(ii), a leak is detected.

(ii) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section R315-261-1059.

(iii) A first attempt at repair, e.g., relapping the seal, shall be made no later than five calendar days after each leak is detected.

(e) Any pump that is designated, as described in Section R315-261-1064(g)(2), for no detectable emissions, as indicated

by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Subsections R315-261-1052(a), (c), and (d) if the pump meets the following requirements:

(1) Shall have no externally actuated shaft penetrating the pump housing.

(2) Shall operate with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in Section R315-261-1063(c).

(3) Shall be tested for compliance with Subsection R315-261-1052(e)(2) initially upon designation, annually, and at other times as requested by the Director.

(f) If any pump is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of Section R315-261-1060, it is exempt from the requirements of Subsections R315-261-1052(a) through (e).

R315-261-1053. Air Emission Standards: Compressors.

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of total organic emissions to the atmosphere, except as provided in Subsections R315-261-1053(h) and (i).

(b) Each compressor seal system as required in Subsection R315-261-1053(a) shall be:

(1) Operated with the barrier fluid at a pressure that is at all times greater than the compressor stuffing box pressure, or

(2) Equipped with a barrier fluid system that is connected by a closed-vent system to a control device that complies with the requirements of Section R315-261-1060, or

(3) Equipped with a system that purges the barrier fluid into a hazardous secondary material stream with no detectable emissions to atmosphere.

(c) The barrier fluid shall not be a hazardous secondary material with organic concentrations 10 percent or greater by weight.

(d) Each barrier fluid system as described in Subsections R315-261-1053(a) through (c) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e)(1) Each sensor as required in Subsection R315-261-1053(d) shall be checked daily or shall be equipped with an audible alarm that shall be checked monthly to ensure that it is functioning properly unless the compressor is located within the boundary of an unmanned plant site, in which case the sensor shall be checked daily.

(2) The remanufacturer or other person that stores or treats the hazardous secondary material shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under Subsection R315-261-1053(e)(2), a leak is detected.

(g)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section R315-261-1059.

(2) A first attempt at repair, e.g., tightening the packing gland, shall be made no later than 5 calendar days after each leak is detected.

(h) A compressor is exempt from the requirements of Subsections R315-261-1053(a) and (b) if it is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal to a control device that complies with the requirements of Section R315-261-1060, except as provided in Subsection R315-261-1053(i).

(i) Any compressor that is designated, as described in Section R315-261-1064(g)(2), for no detectable emissions as

indicated by an instrument reading of less than 500 ppm above background is exempt from the requirements of Subsections R315-261-1053(a) through (h) if the compressor:

(1) Is determined to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Section R315-261-1063(c).

(2) Is tested for compliance with Subsection R315-261-1053(i)(1) initially upon designation, annually, and at other times as requested by the Director.

R315-261-1054. Air Emission Standards: Pressure Relief Devices in Gas/Vapor Service.

(a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Subsection R315-261-1063(c).

(b)(1) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in Section R315-261-1059.

(2) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Subsection R315-261-1063(c).

(c) Any pressure relief device that is equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in Section R315-261-1060 is exempt from the requirements of Subsection R315-261-1054(a) and (b).

R315-261-1055. Air Emission Standards: Sampling Connection Systems.

(a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system. This system shall collect the sample purge for return to the process or for routing to the appropriate treatment system. Gases displaced during filling of the sample container are not required to be collected or captured.

(b) Each closed-purge, closed-loop, or closed-vent system as required in Subsection R315-261-1055(a) shall meet one of the following requirements:

(1) Return the purged process fluid directly to the process line;

(2) Collect and recycle the purged process fluid; or

(3) Be designed and operated to capture and transport all the purged process fluid to a material management unit that complies with the applicable requirements of Sections R315-261-1084 through 1086 or a control device that complies with the requirements of Section R315-261-1060.

(c) In-situ sampling systems and sampling systems without purges are exempt from the requirements of Subsections R315-261-1055(a) and (b).

R315-261-1056. Air Emission Standards: Open-Ended Valves or Lines.

(a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve.

(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring hazardous secondary material stream flow through the open-ended valve or line.

(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the

hazardous secondary material stream end is closed before the second valve is closed.

(c) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with Subsection R315-261-1056(a) at all other times.

R315-261-1057. Air Emission Standards: Valves in Gas/Vapor Service or in Light Liquid Service.

(a) Each valve in gas/vapor or light liquid service shall be monitored monthly to detect leaks by the methods specified in Subsection R315-261-1063(b) and shall comply with Subsections R315-261-1057(b) through (e), except as provided in Subsections R315-261-1057(f), (g), and (h) and Sections R315-261-1061 and 1062.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c)(1) Any valve for which a leak is not detected for two successive months may be monitored the first month of every succeeding quarter, beginning with the next quarter, until a leak is detected.

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for two successive months,

(d)(1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in Section R315-261-1059.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

- (1) Tightening of bonnet bolts.
- (2) Replacement of bonnet bolts.
- (3) Tightening of packing gland nuts.
- (4) Injection of lubricant into lubricated packing.

(f) Any valve that is designated, as described in Subsection R315-261-1064(g)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Subsection R315-261-1057(a) if the valve:

(1) Has no external actuating mechanism in contact with the hazardous secondary material stream.

(2) Is operated with emissions less than 500 ppm above background as determined by the method specified in Subsection R315-261-1063(c).

(3) Is tested for compliance with Subsection R315-261-1057(f)(2) initially upon designation, annually, and at other times as requested by the Director.

(g) Any valve that is designated, as described in Subsection R315-261-1064(h)(1), as an unsafe-to-monitor valve is exempt from the requirements of Subsection R315-261-1057(a) if:

(1) The remanufacturer or other person that stores or treats the hazardous secondary material determines that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with Subsection R315-261-1057(a).

(2) The remanufacturer or other person that stores or treats the hazardous secondary material adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

(h) Any valve that is designated, as described in Subsection R315-261-1064(h)(2), as a difficult-to-monitor valve is exempt from the requirements of Subsection R315-261-1057(a) if:

(1) The remanufacturer or other person that stores or treats the hazardous secondary material determines that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

(2) The hazardous secondary material management unit

within which the valve is located was in operation before the effective date of Rule R315-261.

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

R315-261-1058. Air Emission Standards: Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Flanges and Other Connectors.

(a) Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors shall be monitored within five days by the method specified in subsection R315-261-1063(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section R315-261-1059.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) First attempts at repair include, but are not limited to, the best practices described under Subsection R315-261-1057(e).

(e) Any connector that is inaccessible or is ceramic or ceramic-lined, e.g., porcelain, glass, or glass-lined, is exempt from the monitoring requirements of Subsection R315-261-1058(a) and from the recordkeeping requirements of Section R315-261-1064.

R315-261-1059. Air Emission Standards: Delay of Repair.

(a) Delay of repair of equipment for which leaks have been detected shall be allowed if the repair is technically infeasible without a hazardous secondary material management unit shutdown. In such a case, repair of this equipment shall occur before the end of the next hazardous secondary material management unit shutdown.

(b) Delay of repair of equipment for which leaks have been detected shall be allowed for equipment that is isolated from the hazardous secondary material management unit and that does not continue to contain or contact hazardous secondary material with organic concentrations at least 10 percent by weight.

(c) Delay of repair for valves shall be allowed if:

(1) The remanufacturer or other person that stores or treats the hazardous secondary material determines that emissions of purged material resulting from immediate repair are greater than the emissions likely to result from delay of repair.

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with Section R315-261-1060.

(d) Delay of repair for pumps shall be allowed if:

(1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system.

(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(e) Delay of repair beyond a hazardous secondary material management unit shutdown shall be allowed for a valve if valve assembly replacement is necessary during the hazardous secondary material management unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next hazardous secondary material management unit shutdown will not be allowed unless the next hazardous secondary material management unit shutdown occurs sooner than 6 months after the first hazardous secondary material management unit shutdown.

R315-261-1060. Air Emission Standards: Closed-Vent Systems and Control Devices.

(a) The remanufacturer or other person that stores or treats the hazardous secondary material in a hazardous secondary material management units using closed-vent systems and control devices subject to Sections R315-261-1050 through 1064 shall comply with the provisions of Section R315-261-1033.

(b)(1) The remanufacturer or other person that stores or treats the hazardous secondary material at an existing facility who cannot install a closed-vent system and control device to comply with the provisions of Sections R315-261-1050 through 1064 on the effective date that the facility becomes subject to the provisions of Sections R315-261-1050 through 1064 shall prepare an implementation schedule that includes dates by which the closed-vent system and control device shall be installed and in operation. The controls shall be installed as soon as possible, but the implementation schedule may allow up to 30 months after the effective date that the facility becomes subject to Sections R315-261-1050 through 1064 for installation and startup.

(2) Any unit that begins operation after the effective date of rule R315-261 and is subject to the provisions of Sections R315-261-1050 through 1064 when operation begins, shall comply with the rules immediately, i.e., shall have control devices installed and operating on startup of the affected unit; the 30-month implementation schedule does not apply.

(3) The remanufacturer or other person that stores or treats the hazardous secondary material at any facility in existence on the effective date of a statutory or regulatory amendment that renders the facility subject to Sections R315-261-1050 through 1064 shall comply with all requirements of Sections R315-261-1050 through 1064 as soon as practicable but no later than 30 months after the amendment's effective date. When control equipment required by Sections R315-261-1050 through 1064 cannot be installed and begin operation by the effective date of the amendment, the facility owner or operator shall prepare an implementation schedule that includes the following information: Specific calendar dates for award of contracts or issuance of purchase orders for the control equipment, initiation of on-site installation of the control equipment, completion of the control equipment installation, and performance of any testing to demonstrate that the installed equipment meets the applicable standards of Sections R315-261-1050 through 1064. The remanufacturer or other person that stores or treats the hazardous secondary material shall keep a copy of the implementation schedule at the facility.

(4) Remanufacturers or other persons that store or treat the hazardous secondary materials at facilities and units that become newly subject to the requirements of Sections R315-261-1050 through 1064 after the effective date of Rule R315-261, due to an action other than those described in Subsection R315-261-1060(b)(3) shall comply with all applicable requirements immediately, i.e., shall have control devices installed and operating on the date the facility or unit becomes subject to Sections R315-261-1050 through 1064; the 30-month implementation schedule does not apply.

R315-261-1061. Air Emission Standards for Equipment Leaks - Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Percentage of Valves Allowed to Leak.

(a) A remanufacturer or other person that stores or treats the hazardous secondary material subject to the requirements of Section R315-261-1057 may elect to have all valves within a hazardous secondary material management unit comply with an alternative standard that allows no greater than 2 percent of the valves to leak.

(b) The following requirements shall be met if a

remanufacturer or other person that stores or treats the hazardous secondary material decides to comply with the alternative standard of allowing 2 percent of valves to leak:

(1) A performance test as specified in Subsection R315-261-1061(c) shall be conducted initially upon designation, annually, and at other times requested by the Director.

(2) If a valve leak is detected, it shall be repaired in accordance with Subsections R315-261-1057(d) and (e).

(c) Performance tests shall be conducted in the following manner:

(1) All valves subject to the requirements in Section R315-261-1057 within the hazardous secondary material management unit shall be monitored within 1 week by the methods specified in Subsection R315-261-1063(b).

(2) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(3) The leak percentage shall be determined by dividing the number of valves subject to the requirements in Section R315-261-1057 for which leaks are detected by the total number of valves subject to the requirements in Section R315-261-1057 within the hazardous secondary material management unit.

R315-261-1062. Air Emission Standards for Equipment Leaks - Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Skip Period Leak Detection and Repair.

(a) A remanufacturer or other person that stores or treats the hazardous secondary material subject to the requirements of Section R315-261-1057 may elect for all valves within a hazardous secondary material management unit to comply with one of the alternative work practices specified in Subsections R315-261-1062(b)(2) and (3).

(b)(1) A remanufacturer or other person that stores or treats the hazardous secondary material shall comply with the requirements for valves, as described in Section R315-261-1057, except as described in Subsections R315-261-1062(b)(2) and (3).

(2) After two consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than two percent, a remanufacturer or other person that stores or treats the hazardous secondary material may begin to skip one of the quarterly leak detection periods, i.e., monitor for leaks once every six months, for the valves subject to the requirements in Section R315-261-1057.

(3) After five consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than two percent, a remanufacturer or other person that stores or treats the hazardous secondary material may begin to skip three of the quarterly leak detection periods, i.e., monitor for leaks once every year, for the valves subject to the requirements in Section R315-261-1057.

(4) If the percentage of valves leaking is greater than two percent, the remanufacturer or other person that stores or treats the hazardous secondary material shall monitor monthly in compliance with the requirements in Section R315-261-1057, but may again elect to use Section R315-261-1062 after meeting the requirements of Subsection R315-261-1057(c)(1).

R315-261-1063. Air Emission Standards for Equipment Leaks - Test Methods and Procedures.

(a) Each remanufacturer or other person that stores or treats the hazardous secondary material subject to the provisions of Sections R315-261-1050 through 1064 shall comply with the test methods and procedures requirements provided in Section R315-261-1063.

(b) Leak detection monitoring, as required in Sections R315-261-1052 through 1062, shall comply with the following requirements:

(1) Monitoring shall comply with Reference Method 21 in

40 CFR part 60.

(2) The detection instrument shall meet the performance criteria of Reference Method 21.

(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21.

(4) Calibration gases shall be:

(i) Zero air, less than 10 ppm of hydrocarbon in air.

(ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.

(5) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

(c) When equipment is tested for compliance with no detectable emissions, as required in Subsections R315-261-1052(e), 1053(i), and 1057(f) and Sections R315-261-1054, the test shall comply with the following requirements:

(1) The requirements of Subsections R315-261-1063(b)(1) through (4) shall apply.

(2) The background level shall be determined as set forth in Reference Method 21.

(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(d) A remanufacturer or other person that stores or treats the hazardous secondary material shall determine, for each piece of equipment, whether the equipment contains or contacts a hazardous secondary material with organic concentration that equals or exceeds 10 percent by weight using the following:

(1) Methods described in ASTM Methods D 2267-88, E 169-87, E 168-88, E 260-85, incorporated by reference under Section R315-260-11;

(2) Method 9060A, incorporated by reference under Section R315-260-11, of "Test Methods for Evaluating Solid Waste," EPA Publication SW-846, for computing total organic concentration of the sample, or analyzed for its individual organic constituents; or

(3) Application of the knowledge of the nature of the hazardous secondary material stream or the process by which it was produced. Documentation of a material determination by knowledge is required. Examples of documentation that shall be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the material is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct measurement to have a total organic content less than 10 percent, or prior speciation analysis results on the same material stream where it can also be documented that no process changes have occurred since that analysis that could affect the material total organic concentration.

(e) If a remanufacturer or other person that stores or treats the hazardous secondary material determines that a piece of equipment contains or contacts a hazardous secondary material with organic concentrations at least 10 percent by weight, the determination can be revised only after following the procedures in Subsection R315-261-1063(d)(1) or (2).

(f) When a remanufacturer or other person that stores or treats the hazardous secondary material and the Director do not agree on whether a piece of equipment contains or contacts a hazardous secondary material with organic concentrations at least 10 percent by weight, the procedures in Subsection R315-261-1063(d)(1) or (2) can be used to resolve the dispute.

(g) Samples used in determining the percent organic content shall be representative of the highest total organic

content hazardous secondary material that is expected to be contained in or contact the equipment.

(h) To determine if pumps or valves are in light liquid service, the vapor pressures of constituents may be obtained from standard reference texts or may be determined by ASTM D-2879-86, incorporated by reference under Section R315-260-11.

(i) Performance tests to determine if a control device achieves 95 weight percent organic emission reduction shall comply with the procedures of Subsections R315-261-1034(c)(1) through (4).

R315-261-1064. Air Emission Standards for Equipment Leaks - Recordkeeping Requirements.

(a)(1) Each remanufacturer or other person that stores or treats the hazardous secondary material subject to the provisions of Sections R315-261-1050 through 1064 shall comply with the recordkeeping requirements of Section R315-261-1064.

(2) A remanufacturer or other person that stores or treats the hazardous secondary material in more than one hazardous secondary material management unit subject to the provisions of Sections R315-261-1050 through 1064 may comply with the recordkeeping requirements for these hazardous secondary material management units in one recordkeeping system if the system identifies each record by each hazardous secondary material management unit.

(b) Remanufacturer's and other person's that store or treat the hazardous secondary material shall record and keep the following information at the facility:

(1) For each piece of equipment to which Sections R315-261-1050 through 1064 applies:

(i) Equipment identification number and hazardous secondary material management unit identification.

(ii) Approximate locations within the facility, e.g., identify the hazardous secondary material management unit on a facility plot plan.

(iii) Type of equipment, e.g., a pump or pipeline valve.

(iv) Percent-by-weight total organics in the hazardous secondary material stream at the equipment.

(v) Hazardous secondary material state at the equipment, e.g., gas/vapor or liquid.

(vi) Method of compliance with the standard, e.g., "monthly leak detection and repair" or "equipped with dual mechanical seals".

(2) For facilities that comply with the provisions of Subsection R315-261-1033(a)(2), an implementation schedule as specified in Subsection R315-261-1033(a)(2).

(3) Where a remanufacturer or other person that stores or treats the hazardous secondary material chooses to use test data to demonstrate the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan as specified in Subsection R315-261-1035(b)(3).

(4) Documentation of compliance with Section R315-261-1060, including the detailed design documentation or performance test results specified in Subsection R315-261-1035(b)(4).

(c) When each leak is detected as specified in Sections R315-261-1052, 1053, 1057, and 1058, the following requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, the date evidence of a potential leak was found in accordance with Subsection R315-261-1058(a), and the date the leak was detected, shall be attached to the leaking equipment.

(2) The identification on equipment, except on a valve, may be removed after it has been repaired.

(3) The identification on a valve may be removed after it has been monitored for two successive months as specified in

Subsection R315-261-1057(c) and no leak has been detected during those two months.

(d) When each leak is detected as specified in Sections R315-261-1052, 1053, 1057, and 1058, the following information shall be recorded in an inspection log and shall be kept at the facility:

(1) The instrument and operator identification numbers and the equipment identification number.

(2) The date evidence of a potential leak was found in accordance with Subsection R315-261-1058(a).

(3) The date the leak was detected and the dates of each attempt to repair the leak.

(4) Repair methods applied in each attempt to repair the leak.

(5) "Above 10,000" if the maximum instrument reading measured by the methods specified in Subsection R315-261-1063(b) after each repair attempt is equal to or greater than 10,000 ppm.

(6) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(7) Documentation supporting the delay of repair of a valve in compliance with Subsection R315-261-1059(c).

(8) The signature of the remanufacturer or other person that stores or treats the hazardous secondary material, or designate, whose decision it was that repair could not be effected without a hazardous secondary material management unit shutdown.

(9) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days.

(10) The date of successful repair of the leak.

(e) Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of Section R315-261-1060 shall be recorded and kept up-to-date at the facility as specified in Subsection R315-261-1035(c). Design documentation is specified in Subsections R315-261-1035(c)(1) and (2) and monitoring, operating, and inspection information in Subsections R315-261-1035(c)(3) through (8).

(f) For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the Director shall specify the appropriate recordkeeping requirements.

(g) The following information pertaining to all equipment subject to the requirements in Sections R315-261-1052 through 1060 shall be recorded in a log that is kept at the facility:

(1) A list of identification numbers for equipment, except welded fittings, subject to the requirements of Sections R315-261-1050 through 1064.

(2)(i) A list of identification numbers for equipment that the remanufacturer or other person that stores or treats the hazardous secondary material elects to designate for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, under the provisions of Subsections R315-261-1052(e), 1053(i), and 1057(f).

(ii) The designation of this equipment as subject to the requirements of Subsection R315-261-1052(e), 1053(i), or 1057(f) shall be signed by the remanufacturer or other person that stores or treats the hazardous secondary material.

(3) A list of equipment identification numbers for pressure relief devices required to comply with Subsection R315-261-1054(a).

(4)(i) The dates of each compliance test required in Subsections R315-261-1052(e), 1053(i), and 1057(f) and Section R315-261-1054.

(ii) The background level measured during each compliance test.

(iii) The maximum instrument reading measured at the equipment during each compliance test.

(5) A list of identification numbers for equipment in vacuum service.

(6) Identification, either by list or location, area or group, of equipment that contains or contacts hazardous secondary material with an organic concentration of at least 10 percent by weight for less than 300 hours per calendar year.

(h) The following information pertaining to all valves subject to the requirements of Subsections R315-261-1057(g) and (h) shall be recorded in a log that is kept at the facility:

(1) A list of identification numbers for valves that are designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe to monitor, and the plan for monitoring each valve.

(2) A list of identification numbers for valves that are designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the planned schedule for monitoring each valve.

(i) The following information shall be recorded in a log that is kept at the facility for valves complying with Section R315-261-1062:

(1) A schedule of monitoring.

(2) The percent of valves found leaking during each monitoring period.

(j) The following information shall be recorded in a log that is kept at the facility:

(1) Criteria required in Subsections R315-261-1052(d)(5)(ii) and 1053(e)(2) and an explanation of the design criteria.

(2) Any changes to these criteria and the reasons for the changes.

(k) The following information shall be recorded in a log that is kept at the facility for use in determining exemptions as provided in the applicability section of Sections R315-261-1050 and other Sections of Rule R315-261:

(1) An analysis determining the design capacity of the hazardous secondary material management unit.

(2) A statement listing the hazardous secondary material influent to and effluent from each hazardous secondary material management unit subject to the requirements in Sections R315-261-1052 through 1060 and an analysis determining whether these hazardous secondary materials are heavy liquids.

(3) An up-to-date analysis and the supporting information and data used to determine whether or not equipment is subject to the requirements in Sections R315-261-1052 through 1060. The record shall include supporting documentation as required by Subsection R315-261-1063(d)(3) when application of the knowledge of the nature of the hazardous secondary material stream or the process by which it was produced is used. If the remanufacturer or other person that stores or treats the hazardous secondary material takes any action, e.g., changing the process that produced the material, that could result in an increase in the total organic content of the material contained in or contacted by equipment determined not to be subject to the requirements in Sections R315-261-1052 through 1060, then a new determination is required.

(l) Records of the equipment leak information required by Subsection R315-261-1064(d) and the operating information required by Subsection R315-261-1064(e) need be kept only three years.

(m) The remanufacturer or other person that stores or treats the hazardous secondary material at a facility with equipment that is subject to Sections R315-261-1050 through 1064 and to regulations at 40 CFR part 60, part 61, or part 63 may elect to determine compliance with Sections R315-261-1050 through 1064 either by documentation pursuant to Section R315-261-1064, or by documentation of compliance with the regulations at 40 CFR part 60, part 61, or part 63 pursuant to the relevant provisions of the regulations at 40 part 60, part 61, or part 63. The documentation of compliance under regulations at

40 CFR part 60, part 61, or part 63 shall be kept with or made readily available at the facility.

R315-261-1080. Air Emission Standards for Tanks and Containers - Applicability.

(a) The regulations in Sections R315-261-1080 through 1089 apply to tanks and containers that contain hazardous secondary materials excluded under the remanufacturing exclusion at Subsection R315-261-4(a)(27), unless the tanks and containers are equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulations codified under 40 CFR part 60, part 61, or part 63.

R315-261-1081. Air Emission Standards for Tanks and Containers - Definitions.

(a) As used in Sections R315-261-1080 through 1089, all terms not defined herein shall have the meaning given to them in the Resource Conservation and Recovery Act, the Utah Solid and Hazardous Waste Act, and Rules R315-260 through 266.

(1) "Average volatile organic concentration or average VO concentration" means the mass-weighted average volatile organic concentration of a hazardous secondary material as determined in accordance with the requirements of Section R315-261-1084.

(2) "Closure device" means a cap, hatch, lid, plug, seal, valve, or other type of fitting that blocks an opening in a cover such that when the device is secured in the closed position it prevents or reduces air pollutant emissions to the atmosphere. Closure devices include devices that are detachable from the cover; e.g., a sampling port cap; manually operated, e.g., a hinged access lid or hatch; or automatically operated, e.g., a spring-loaded pressure relief valve.

(3) "Continuous seal" means a seal that forms a continuous closure that completely covers the space between the edge of the floating roof and the wall of a tank. A continuous seal may be a vapor-mounted seal, liquid-mounted seal, or metallic shoe seal. A continuous seal may be constructed of fastened segments so as to form a continuous seal.

(4) "Cover" means a device that provides a continuous barrier over the hazardous secondary material managed in a unit to prevent or reduce air pollutant emissions to the atmosphere. A cover may have openings, such as access hatches, sampling ports, gauge wells, that are necessary for operation, inspection, maintenance, and repair of the unit on which the cover is used. A cover may be a separate piece of equipment which can be detached and removed from the unit or a cover may be formed by structural features permanently integrated into the design of the unit.

(5) "Empty hazardous secondary material container" means:

(a) A container from which all hazardous secondary materials have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating, and no more than 2.5 centimeters, one inch, of residue remain on the bottom of the container or inner liner;

(b) A container that is less than or equal to 119 gallons in size and no more than 3 percent by weight of the total capacity of the container remains in the container or inner liner; or

(c) A container that is greater than 119 gallons in size and no more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner.

(6) "Enclosure" means a structure that surrounds a tank or container, captures organic vapors emitted from the tank or container, and vents the captured vapors through a closed-vent system to a control device.

(7) "External floating roof" means a pontoon-type or double-deck type cover that rests on the surface of the material

managed in a tank with no fixed roof.

(8) "Fixed roof" means a cover that is mounted on a unit in a stationary position and does not move with fluctuations in the level of the material managed in the unit.

(9) "Floating membrane cover" means a cover consisting of a synthetic flexible membrane material that rests upon and is supported by the hazardous secondary material being managed in a surface impoundment.

(10) "Floating roof" means a cover consisting of a double deck, pontoon single deck, or internal floating cover which rests upon and is supported by the material being contained, and is equipped with a continuous seal.

(11) "Hard-piping" means pipe or tubing that is manufactured and properly installed in accordance with relevant standards and good engineering practices.

(12) "In light material service" means the container is used to manage a material for which both of the following conditions apply: The vapor pressure of one or more of the organic constituents in the material is greater than 0.3 kilopascals (kPa) at 20 degrees C; and the total concentration of the pure organic constituents having a vapor pressure greater than 0.3 kPa at 20 degrees C is equal to or greater than 20 percent by weight.

(13) "Internal floating roof" means a cover that rests or floats on the material surface, but not necessarily in complete contact with it, inside a tank that has a fixed roof.

(14) "Liquid-mounted seal" means a foam or liquid-filled primary seal mounted in contact with the hazardous secondary material between the tank wall and the floating roof continuously around the circumference of the tank.

(15) "Malfunction" means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(16) "Material determination" means performing all applicable procedures in accordance with the requirements of Section R315-261-1084 to determine whether a hazardous secondary material meets standards specified in Sections R315-261-1080 through 1089. Examples of a material determination include performing the procedures in accordance with the requirements of Section R315-261-1084 to determine the average VO concentration of a hazardous secondary material at the point of material origination; the average VO concentration of a hazardous secondary material at the point of material treatment and comparing the results to the exit concentration limit specified for the process used to treat the hazardous secondary material; the organic reduction efficiency and the organic biodegradation efficiency for a biological process used to treat a hazardous secondary material and comparing the results to the applicable standards; or the maximum volatile organic vapor pressure for a hazardous secondary material in a tank and comparing the results to the applicable standards.

(17) "Maximum organic vapor pressure" means the sum of the individual organic constituent partial pressures exerted by the material contained in a tank, at the maximum vapor pressure-causing conditions, i.e., temperature, agitation, pH effects of combining materials, etc., reasonably expected to occur in the tank. For the purpose of Sections R315-261-1080 through 1089, maximum organic vapor pressure is determined using the procedures specified in Subsection R315-261-1084(c).

(18) "Metallic shoe seal" means a continuous seal that is constructed of metal sheets which are held vertically against the wall of the tank by springs, weighted levers, or other mechanisms and is connected to the floating roof by braces or other means. A flexible coated fabric, envelope, spans the annular space between the metal sheet and the floating roof.

(19) "No detectable organic emissions" means no escape of organics to the atmosphere as determined using the procedure specified in Subsection R315-261-1084(d).

(20) "Point of material origination" means as follows:

(a) When the remanufacturer or other person that stores or treats the hazardous secondary material is the generator of the hazardous secondary material, the point of material origination means the point where a material produced by a system, process, or material management unit is determined to be a hazardous secondary material excluded under Subsection R315-261-4(a)(27).

Note to paragraph (a) of the definition of "Point of material origination: "In this case, this term is being used in a manner similar to the use of the term "point of generation" in air standards established under authority of the Clean Air Act in 40 CFR parts 60, 61, and 63.

(b) When the remanufacturer or other person that stores or treats the hazardous secondary material is not the generator of the hazardous secondary material, point of material origination means the point where the remanufacturer or other person that stores or treats the hazardous secondary material accepts delivery or takes possession of the hazardous secondary material.

(21) "Safety device" means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purpose of Sections R315-261-1080 through 1089, a safety device is not used for routine venting of gases or vapors from the vapor headspace underneath a cover such as during filling of the unit or to adjust the pressure in this vapor headspace in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the air emission control equipment as determined by the remanufacturer or other person that stores or treats the hazardous secondary material based on manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials.

(22) "Single-seal system" means a floating roof having one continuous seal. This seal may be vapor-mounted, liquid-mounted, or a metallic shoe seal.

(23) "Vapor-mounted seal" means a continuous seal that is mounted such that there is a vapor space between the hazardous secondary material in the unit and the bottom of the seal.

(24) "Volatile organic concentration" or "VO concentration" means the fraction by weight of the volatile organic compounds contained in a hazardous secondary material expressed in terms of parts per million (ppmw) as determined by direct measurement or by knowledge of the material in accordance with the requirements of Section R315-261-1084. For the purpose of determining the VO concentration of a hazardous secondary material, organic compounds with a Henry's law constant value of at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in the liquid-phase (0.1 Y/X), which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/m³, at 25 deg. Celsius shall be included.

R315-261-1082. Air Emission Standards for Tanks and Containers - Standards: General.

(a) Section R315-261-1082 applies to the management of hazardous secondary material in tanks and containers subject to Sections R315-261-1080 through 1089.

(b) The remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant

emissions from each hazardous secondary material management unit in accordance with standards specified in Sections R315-261-1084 through 1087, as applicable to the hazardous secondary material management unit, except as provided for in Subsection R315-261-1082(c).

(c) A tank or container is exempt from standards specified in Sections R315-261-1084 through 1087, as applicable, provided that the hazardous secondary material management unit is a tank or container for which all hazardous secondary material entering the unit has an average VO concentration at the point of material origination of less than 500 parts per million by weight (ppmw). The average VO concentration shall be determined using the procedures specified in Subsection R315-261-1083(a). The remanufacturer or other person that stores or treats the hazardous secondary material shall review and update, as necessary, this determination at least once every 12 months following the date of the initial determination for the hazardous secondary material streams entering the unit.

R315-261-1083. Air Emission Standards for Tanks and Containers - Material Determination Procedures.

(a) Material determination procedure to determine average volatile organic (VO) concentration of a hazardous secondary material at the point of material origination.

(1) Determining average VO concentration at the point of material origination. A remanufacturer or other person that stores or treats the hazardous secondary material shall determine the average VO concentration at the point of material origination for each hazardous secondary material placed in a hazardous secondary material management unit exempted under the provisions of Subsection R315-261-1082(c)(1) from using air emission controls in accordance with standards specified in Sections R315-261-1084 through 1087, as applicable to the hazardous secondary material management unit.

(i) An initial determination of the average VO concentration of the material stream shall be made before the first time any portion of the material in the hazardous secondary material stream is placed in a hazardous secondary material management unit exempted under the provisions of Subsection R315-261-1082(c)(1) from using air emission controls, and thereafter an initial determination of the average VO concentration of the material stream shall be made for each averaging period that a hazardous secondary material is managed in the unit; and

(ii) Perform a new material determination whenever changes to the source generating the material stream are reasonably likely to cause the average VO concentration of the hazardous secondary material to increase to a level that is equal to or greater than the applicable VO concentration limits specified in Section R315-261-1082.

(2) Determination of average VO concentration using direct measurement or knowledge. For a material determination that is required by Subsection R315-261-1083(a)(1), the average VO concentration of a hazardous secondary material at the point of material origination shall be determined using either direct measurement as specified in Subsection R315-261-1083(a)(3) or by knowledge as specified in Subsection R315-261-1083(a)(4).

(3) Direct measurement to determine average VO concentration of a hazardous secondary material at the point of material origination.

(i) Identification. The remanufacturer or other person that stores or treats the hazardous secondary material shall identify and record in a log that is kept at the facility the point of material origination for the hazardous secondary material.

(ii) Sampling. Samples of the hazardous secondary material stream shall be collected at the point of material origination in a manner such that volatilization of organics contained in the material and in the subsequent sample is

minimized and an adequately representative sample is collected and maintained for analysis by the selected method.

(A) The averaging period to be used for determining the average VO concentration for the hazardous secondary material stream on a mass-weighted average basis shall be designated and recorded. The averaging period can represent any time interval that the remanufacturer or other person that stores or treats the hazardous secondary material determines is appropriate for the hazardous secondary material stream but shall not exceed 1 year.

(B) A sufficient number of samples, but no less than four samples, shall be collected and analyzed for a hazardous secondary material determination. All of the samples for a given material determination shall be collected within a one-hour period. The average of the four or more sample results constitutes a material determination for the material stream. One or more material determinations may be required to represent the complete range of material compositions and quantities that occur during the entire averaging period due to normal variations in the operating conditions for the source or process generating the hazardous secondary material stream. Examples of such normal variations are seasonal variations in material quantity or fluctuations in ambient temperature.

(C) All samples shall be collected and handled in accordance with written procedures prepared by the remanufacturer or other person that stores or treats the hazardous secondary material and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the hazardous secondary material stream are collected such that a minimum loss of organics occurs throughout the sample collection and handling process, and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained at the facility. An example of acceptable sample collection and handling procedures for a total volatile organic constituent concentration may be found in Method 25D in 40 CFR part 60, appendix A.

(D) Sufficient information, as specified in the "site sampling plan" required under Subsection R315-261-1083(a)(3)(ii)(C), shall be prepared and recorded to document the material quantity represented by the samples and, as applicable, the operating conditions for the source or process generating the hazardous secondary material represented by the samples.

(iii) Analysis. Each collected sample shall be prepared and analyzed in accordance with Method 25D in 40 CFR part 60, appendix A for the total concentration of volatile organic constituents, or using one or more methods when the individual organic compound concentrations are identified and summed and the summed material concentration accounts for and reflects all organic compounds in the material with Henry's law constant values at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X), which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/m³, at 25 deg. Celsius. At the discretion of the remanufacturer or other person that stores or treats the hazardous secondary material, the test data obtained may be adjusted by any appropriate method to discount any contribution to the total volatile organic concentration that is a result of including a compound with a Henry's law constant value of less than 0.1 Y/X at 25 deg. Celsius. To adjust these data, the measured concentration of each individual chemical constituent contained in the material is multiplied by the appropriate constituent-specific adjustment factor (f_{m25D}). If the remanufacturer or other person that stores or treats the hazardous secondary material elects to adjust the test data, the adjustment shall be made to all individual chemical constituents with a Henry's law constant value greater than or equal to 0.1 Y/X at 25 degrees Celsius contained in the material. Constituent-specific adjustment factors (f_{m25D}) can be obtained by contacting the Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park,

NC 27711. Other test methods may be used if they meet the requirements in Subsection R315-261-1083(a)(3)(iii)(A) or (B) and provided the requirement to reflect all organic compounds in the material with Henry's law constant values greater than or equal to 0.1 Y/X, which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/m³, at 25 deg. Celsius, is met.

(A) Any EPA standard method that has been validated in accordance with "Alternative Validation Procedure for EPA Waste and Wastewater Methods," 40 CFR part 63, appendix D.

(B) Any other analysis method that has been validated in accordance with the procedures specified in Section 5.1 or Section 5.3, and the corresponding calculations in Section 6.1 or Section 6.3, of Method 301 in 40 CFR part 63, appendix A. The data are acceptable if they meet the criteria specified in Section 6.1.5 or Section 6.3.3 of Method 301. If correction is required under section 6.3.3 of Method 301, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of Method 301 are not required.

(iv) Calculations.

(A) The average VO concentration (C) on a mass-weighted basis shall be calculated by using the results for all material determinations conducted in accordance with Subsections R315-261-1083(a)(3)(ii) and (iii) and the following equation:

The equation found in 40 CFR 261.1083(a)(3)(iv)(A), 2015 ed. is adopted and incorporated by reference.

Where:

C = Average VO concentration of the hazardous secondary material at the point of material origination on a mass-weighted basis, ppmw.

i = Individual material determination "i" of the hazardous secondary material.

n = Total number of material determinations of the hazardous secondary material conducted for the averaging period (not to exceed 1 year).

Q_i = Mass quantity of hazardous secondary material stream represented by C_i , kg/hr.

Q_T = Total mass quantity of hazardous secondary material during the averaging period, kg/hr.

C_i = Measured VO concentration of material determination "i" as determined in accordance with the requirements of Subsection R315-261-1083(a)(3)(iii), i.e., the average of the four or more samples specified in Subsection R315-261-1083(a)(3)(ii)(B), ppmw.

(B) For the purpose of determining C_i for individual material samples analyzed in accordance with Subsection R315-261-1083(a)(3)(iii), the remanufacturer or other person that stores or treats the hazardous secondary material shall account for VO concentrations determined to be below the limit of detection of the analytical method by using the following VO concentration:

(I) If Method 25D in 40 CFR part 60, appendix A is used for the analysis, one-half the blank value determined in the method at section 4.4 of Method 25D in 40 CFR part 60, appendix A.

(II) If any other analytical method is used, one-half the sum of the limits of detection established for each organic constituent in the material that has a Henry's law constant values at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X), which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/m³, at 25 degrees Celsius.

(4) Use of knowledge by the remanufacturer or other person that stores or treats the hazardous secondary material to determine average VO concentration of a hazardous secondary material at the point of material origination.

(i) Documentation shall be prepared that presents the information used as the basis for the knowledge by the remanufacturer or other person that stores or treats the hazardous secondary material of the hazardous secondary

material stream's average VO concentration. Examples of information that may be used as the basis for knowledge include: Material balances for the source or process generating the hazardous secondary material stream; constituent-specific chemical test data for the hazardous secondary material stream from previous testing that are still applicable to the current material stream; previous test data for other locations managing the same type of material stream; or other knowledge based on information included in shipping papers or material certification notices.

(ii) If test data are used as the basis for knowledge, then the remanufacturer or other person that stores or treats the hazardous secondary material shall document the test method, sampling protocol, and the means by which sampling variability and analytical variability are accounted for in the determination of the average VO concentration. For example, a remanufacturer or other person that stores or treats the hazardous secondary material may use organic concentration test data for the hazardous secondary material stream that are validated in accordance with Method 301 in 40 CFR part 63, appendix A as the basis for knowledge of the material.

(iii) A remanufacturer or other person that stores or treats the hazardous secondary material using chemical constituent-specific concentration test data as the basis for knowledge of the hazardous secondary material may adjust the test data to the corresponding average VO concentration value which would have been obtained had the material samples been analyzed using Method 25D in 40 CFR part 60, appendix A. To adjust these data, the measured concentration for each individual chemical constituent contained in the material is multiplied by the appropriate constituent-specific adjustment factor (f_{m25D}).

(iv) In the event that the Director and the remanufacturer or other person that stores or treats the hazardous secondary material disagree on a determination of the average VO concentration for a hazardous secondary material stream using knowledge, then the results from a determination of average VO concentration using direct measurement as specified in Subsection R315-261-1083(a)(3) shall be used to establish compliance with the applicable requirements of Sections R315-261-1080 through 1089. The Director may perform or request that the remanufacturer or other person that stores or treats the hazardous secondary material perform this determination using direct measurement. The remanufacturer or other person that stores or treats the hazardous secondary material may choose one or more appropriate methods to analyze each collected sample in accordance with the requirements of Subsection R315-261-1083(a)(3)(iii).

(b) Reserved

(c) Procedure to determine the maximum organic vapor pressure of a hazardous secondary material in a tank.

(1) A remanufacturer or other person that stores or treats the hazardous secondary material shall determine the maximum organic vapor pressure for each hazardous secondary material placed in a tank using Tank Level 1 controls in accordance with standards specified in Subsection R315-261-1084(c).

(2) A remanufacturer or other person that stores or treats the hazardous secondary material shall use either direct measurement as specified in Subsection R315-261-1083(c)(3) or knowledge of the waste as specified by Subsection R315-261-1083(c)(4) to determine the maximum organic vapor pressure which is representative of the hazardous secondary material composition stored or treated in the tank.

(3) Direct measurement to determine the maximum organic vapor pressure of a hazardous secondary material.

(i) Sampling. A sufficient number of samples shall be collected to be representative of the hazardous secondary material contained in the tank. All samples shall be collected and handled in accordance with written procedures prepared by the remanufacturer or other person that stores or treats the

hazardous secondary material and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the hazardous secondary material are collected such that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained at the facility. An example of acceptable sample collection and handling procedures may be found in Method 25D in 40 CFR part 60, appendix A.

(ii) Analysis. Any appropriate one of the following methods may be used to analyze the samples and compute the maximum organic vapor pressure of the hazardous secondary material:

(A) Method 25E in 40 CFR part 60 appendix A;

(B) Methods described in American Petroleum Institute Publication 2517, Third Edition, February 1989, "Evaporative Loss from External Floating-Roof Tanks," incorporated by reference - refer to Section R315-260-11;

(C) Methods obtained from standard reference texts;

(D) ASTM Method 2879-92, incorporated by reference - refer to Section R315-260-11; and

(E) Any other method approved by the Director.

(4) Use of knowledge to determine the maximum organic vapor pressure of the hazardous secondary material. Documentation shall be prepared and recorded that presents the information used as the basis for the knowledge by the remanufacturer or other person that stores or treats the hazardous secondary material that the maximum organic vapor pressure of the hazardous secondary material is less than the maximum vapor pressure limit listed in Subsection R315-261-1085(b)(1)(i) for the applicable tank design capacity category. An example of information that may be used is documentation that the hazardous secondary material is generated by a process for which at other locations it previously has been determined by direct measurement that the hazardous secondary material's waste maximum organic vapor pressure is less than the maximum vapor pressure limit for the appropriate tank design capacity category.

(d) Procedure for determining no detectable organic emissions for the purpose of complying with Sections R315-261-1080 through 1089:

(1) The test shall be conducted in accordance with the procedures specified in Method 21 of 40 CFR part 60, appendix A. Each potential leak interface, i.e., a location where organic vapor leakage could occur, on the cover and associated closure devices shall be checked. Potential leak interfaces that are associated with covers and closure devices include, but are not limited to: The interface of the cover and its foundation mounting; the periphery of any opening on the cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure relief valve.

(2) The test shall be performed when the unit contains a hazardous secondary material having an organic concentration representative of the range of concentrations for the hazardous secondary material expected to be managed in the unit. During the test, the cover and closure devices shall be secured in the closed position.

(3) The detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the average composition of the organic constituents in the hazardous secondary material placed in the hazardous secondary management unit, not for each individual organic constituent.

(4) The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.

(5) Calibration gases shall be as follows:

(i) Zero air, less than 10 ppmv hydrocarbon in air, and

(ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppmv methane or n-hexane.

(6) The background level shall be determined according to the procedures in Method 21 of 40 CFR part 60, appendix A.

(7) Each potential leak interface shall be checked by traversing the instrument probe around the potential leak interface as close to the interface as possible, as described in Method 21 of 40 CFR part 60, appendix A. In the case when the configuration of the cover or closure device prevents a complete traverse of the interface, all accessible portions of the interface shall be sampled. In the case when the configuration of the closure device prevents any sampling at the interface and the device is equipped with an enclosed extension or horn, e.g., some pressure relief devices, the instrument probe inlet shall be placed at approximately the center of the exhaust area to the atmosphere.

(8) The arithmetic difference between the maximum organic concentration indicated by the instrument and the background level shall be compared with the value of 500 ppmv except when monitoring a seal around a rotating shaft that passes through a cover opening, in which case the comparison shall be as specified in Subsection R315-261-1083(d)(9). If the difference is less than 500 ppmv, then the potential leak interface is determined to operate with no detectable organic emissions.

(9) For the seals around a rotating shaft that passes through a cover opening, the arithmetic difference between the maximum organic concentration indicated by the instrument and the background level shall be compared with the value of 10,000 ppmw. If the difference is less than 10,000 ppmw, then the potential leak interface is determined to operate with no detectable organic emissions.

R315-261-1084. Air Emission Standards for Tanks and Containers - Standards: Tanks.

(a) The provisions of Section R315-261-1084 apply to the control of air pollutant emissions from tanks for which Subsection R315-261-1082(b) references the use of Section R315-261-1084 for such air emission control.

(b) The remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from each tank subject to Section R315-261-1084 in accordance with the following requirements as applicable:

(1) For a tank that manages hazardous secondary material that meets all of the conditions specified in Subsections R315-261-1084(b)(1)(i) through (iii), the remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from the tank in accordance with the Tank Level 1 controls specified in Subsection R315-261-1084(c) or the Tank Level 2 controls specified in Subsection R315-261-1084(d).

(i) The hazardous secondary material in the tank has a maximum organic vapor pressure which is less than the maximum organic vapor pressure limit for the tank's design capacity category as follows:

(A) For a tank design capacity equal to or greater than 151 m³, the maximum organic vapor pressure limit for the tank is 5.2 kPa.

(B) For a tank design capacity equal to or greater than 75 m³ but less than 151 m³, the maximum organic vapor pressure limit for the tank is 27.6 kPa.

(C) For a tank design capacity less than 75 m³, the maximum organic vapor pressure limit for the tank is 76.6 kPa.

(ii) The hazardous secondary material in the tank is not heated by the remanufacturer or other person that stores or treats the hazardous secondary material to a temperature that is greater than the temperature at which the maximum organic vapor pressure of the hazardous secondary material is determined for

the purpose of complying with Subsection R315-261-1084(b)(1)(i).

(2) For a tank that manages hazardous secondary material that does not meet all of the conditions specified in Subsections R315-261-1084(b)(1)(i) through (iii), the remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from the tank by using Tank Level 2 controls in accordance with the requirements of Subsection R315-261-1084(d). An example of tanks required to use Tank Level 2 controls is a tank for which the hazardous secondary material in the tank has a maximum organic vapor pressure that is equal to or greater than the maximum organic vapor pressure limit for the tank's design capacity category as specified in Subsection R315-261-1084(b)(1)(i).

(c) Remanufacturers or other persons that store or treat the hazardous secondary material controlling air pollutant emissions from a tank using Tank Level 1 controls shall meet the requirements specified in Subsection R315-261-1084(c)(1) through (4):

(1) The remanufacturer or other person that stores or treats that hazardous secondary material shall determine the maximum organic vapor pressure for a hazardous secondary material to be managed in the tank using Tank Level 1 controls before the first time the hazardous secondary material is placed in the tank. The maximum organic vapor pressure shall be determined using the procedures specified in Subsection R315-261-1083(c). Thereafter, the remanufacturer or other person that stores or treats the hazardous secondary material shall perform a new determination whenever changes to the hazardous secondary material managed in the tank could potentially cause the maximum organic vapor pressure to increase to a level that is equal to or greater than the maximum organic vapor pressure limit for the tank design capacity category specified in Subsection R315-261-1084(b)(1)(i), as applicable to the tank.

(2) The tank shall be equipped with a fixed roof designed to meet the following specifications:

(i) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the hazardous secondary material in the tank. The fixed roof may be a separate cover installed on the tank, e.g., a removable cover mounted on an open-top tank, or may be an integral part of the tank structural design, e.g., a horizontal cylindrical tank equipped with a hatch.

(ii) The fixed roof shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between roof section joints or between the interface of the roof edge and the tank wall.

(iii) Each opening in the fixed roof, and any manifold system associated with the fixed roof, shall be either:

(A) Equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device; or

(B) Connected by a closed-vent system that is vented to a control device. The control device shall remove or destroy organics in the vent stream, and shall be operating whenever hazardous secondary material is managed in the tank, except as provided for in Subsection R315-261-1084(c)(2)(iii)(B)(I) and (II).

(I) During periods when it is necessary to provide access to the tank for performing the activities of Subsection R315-261-1084(c)(2)(iii)(B)(II), venting of the vapor headspace underneath the fixed roof to the control device is not required, opening of closure devices is allowed, and removal of the fixed roof is allowed. Following completion of the activity, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure

device in the closed position or reinstall the cover, as applicable, and resume operation of the control device.

(II) During periods of routine inspection, maintenance, or other activities needed for normal operations, and for removal of accumulated sludge or other residues from the bottom of the tank.

(iv) The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous secondary material to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: organic vapor permeability, the effects of any contact with the hazardous secondary material or its vapors managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

(3) Whenever a hazardous secondary material is in the tank, the fixed roof shall be installed with each closure device secured in the closed position except as follows:

(i) Opening of closure devices or removal of the fixed roof is allowed at the following times:

(A) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

(B) To remove accumulated sludge or other residues from the bottom of tank.

(ii) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the tank internal pressure in accordance with the tank design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the tank internal pressure is within the internal pressure operating range determined by the remanufacturer or other person that stores or treats the hazardous secondary material based on the tank manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the tank internal pressure exceeds the internal pressure operating range for the tank as a result of loading operations or diurnal ambient temperature fluctuations.

(iii) Opening of a safety device, as defined in Section R315-261-1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(4) The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect the air emission control equipment in accordance with the following requirements.

(i) The fixed roof and its closure devices shall be visually inspected by the remanufacturer or other person that stores or treats the hazardous secondary material to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or

otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The remanufacturer or other person that stores or treats the hazardous secondary material shall perform an initial inspection of the fixed roof and its closure devices on or before the date that the tank becomes subject to Section R315-261-1084. Thereafter, the remanufacturer or other person that stores or treats the hazardous secondary material shall perform the inspections at least once every year except under the special conditions provided for in Subsection R315-261-1084(l).

(iii) In the event that a defect is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of Subsection R315-261-1084(k).

(iv) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection in accordance with the requirements specified in Subsection R315-261-1089(b).

(d) Remanufacturers or other persons that store or treat the hazardous secondary material controlling air pollutant emissions from a tank using Tank Level 2 controls shall use one of the following tanks:

(1) A fixed-roof tank equipped with an internal floating roof in accordance with the requirements specified in Subsection R315-261-1084(e);

(2) A tank equipped with an external floating roof in accordance with the requirements specified in Subsection R315-261-1084(f);

(3) A tank vented through a closed-vent system to a control device in accordance with the requirements specified in Subsection R315-261-1084(g);

(4) A pressure tank designed and operated in accordance with the requirements specified in Subsection R315-261-1084(h); or

(5) A tank located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device in accordance with the requirements specified in Subsection R315-261-1084(i).

(e) The remanufacturer or other person that stores or treats the hazardous secondary material who controls air pollutant emissions from a tank using a fixed roof with an internal floating roof shall meet the requirements specified in Subsections R315-261-1084(e)(1) through (3).

(1) The tank shall be equipped with a fixed roof and an internal floating roof in accordance with the following requirements:

(i) The internal floating roof shall be designed to float on the liquid surface except when the floating roof shall be supported by the leg supports.

(ii) The internal floating roof shall be equipped with a continuous seal between the wall of the tank and the floating roof edge that meets either of the following requirements:

(A) A single continuous seal that is either a liquid-mounted seal or a metallic shoe seal, as defined in Section R315-261-1081; or

(B) Two continuous seals mounted one above the other. The lower seal may be a vapor-mounted seal.

(iii) The internal floating roof shall meet the following specifications:

(A) Each opening in a noncontact internal floating roof except for automatic bleeder vents, vacuum breaker vents, and the rim space vents is to provide a projection below the liquid surface.

(B) Each opening in the internal floating roof shall be equipped with a gasketed cover or a gasketed lid except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains.

(C) Each penetration of the internal floating roof for the purpose of sampling shall have a slit fabric cover that covers at least 90 percent of the opening.

(D) Each automatic bleeder vent and rim space vent shall be gasketed.

(E) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(F) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(2) The remanufacturer or other person that stores or treats the hazardous secondary material shall operate the tank in accordance with the following requirements:

(i) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be completed as soon as practical.

(ii) Automatic bleeder vents are to be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

(iii) Prior to filling the tank, each cover, access hatch, gauge float well or lid on any opening in the internal floating roof shall be bolted or fastened closed, i.e., no visible gaps. Rim space vents are to be set to open only when the internal floating roof is not floating or when the pressure beneath the rim exceeds the manufacturer's recommended setting.

(3) The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect the internal floating roof in accordance with the procedures specified as follows:

(i) The floating roof and its closure devices shall be visually inspected by the remanufacturer or other person that stores or treats the hazardous secondary material to check for defects that could result in air pollutant emissions. Defects include, but are not limited to: The internal floating roof is not floating on the surface of the liquid inside the tank; liquid has accumulated on top of the internal floating roof; any portion of the roof seals have detached from the roof rim; holes, tears, or other openings are visible in the seal fabric; the gaskets no longer close off the hazardous secondary material surface from the atmosphere; or the slotted membrane has more than 10 percent open area.

(ii) The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect the internal floating roof components as follows except as provided in Subsection R315-261-1084(e)(3)(iii):

(A) Visually inspect the internal floating roof components through openings on the fixed-roof, e.g., manholes and roof hatches, at least once every 12 months after initial fill, and

(B) Visually inspect the internal floating roof, primary seal, secondary seal, if one is in service, gaskets, slotted membranes, and sleeve seals, if any, each time the tank is emptied and degassed and at least every 10 years.

(iii) As an alternative to performing the inspections specified in Subsection R315-261-1084(e)(3)(ii) for an internal floating roof equipped with two continuous seals mounted one above the other, the remanufacturer or other person that stores or treats the hazardous secondary material may visually inspect the internal floating roof, primary and secondary seals, gaskets, slotted membranes, and sleeve seals, if any, each time the tank is emptied and degassed and at least every five years.

(iv) Prior to each inspection required by Subsection R315-261-1084(e)(3)(ii) or (iii), the remanufacturer or other person that stores or treats the hazardous secondary material shall notify the Director in advance of each inspection to provide the Director with the opportunity to have an observer present during the inspection. The remanufacturer or other person that stores or treats the hazardous secondary material shall notify the Director of the date and location of the inspection as follows:

(A) Prior to each visual inspection of an internal floating roof in a tank that has been emptied and degassed, written notification shall be prepared and sent by the remanufacturer or other person that stores or treats the hazardous secondary material so that it is received by the Director at least 30 calendar days before refilling the tank except when an inspection is not planned as provided for in Subsection R315-261-1084(e)(3)(iv)(B).

(B) When a visual inspection is not planned and the remanufacturer or other person that stores or treats the hazardous secondary material could not have known about the inspection 30 calendar days before refilling the tank, the remanufacturer or other person that stores or treats the hazardous secondary material shall notify the Director as soon as possible, but no later than seven calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the Director at least seven calendar days before refilling the tank.

(v) In the event that a defect is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of Subsection R315-261-1084(k).

(vi) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection in accordance with the requirements specified in Subsection R315-261-1089(b).

(4) Safety devices, as defined in Section R315-261-1081, may be installed and operated as necessary on any tank complying with the requirements of Subsection R315-261-1084(e).

(f) The remanufacturer or other person that stores or treats the hazardous secondary material who controls air pollutant emissions from a tank using an external floating roof shall meet the requirements specified in Subsections R315-261-1084(f)(1) through (3).

(1) The remanufacturer or other person that stores or treats the hazardous secondary material shall design the external floating roof in accordance with the following requirements:

(i) The external floating roof shall be designed to float on the liquid surface except when the floating roof shall be supported by the leg supports.

(ii) The floating roof shall be equipped with two continuous seals, one above the other, between the wall of the tank and the roof edge. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be a liquid-mounted seal or a metallic shoe seal, as defined in Section R315-261-1081. The total area of the gaps between the tank wall and the primary seal shall not exceed 212 square centimeters per meter of tank diameter, and the width of any portion of these gaps shall not exceed 3.8 centimeters. If a metallic shoe seal is used for the primary seal, the metallic shoe seal shall be designed so that one end extends into the liquid in the tank and the other end extends a vertical distance of at least 61 centimeters above the liquid surface.

(B) The secondary seal shall be mounted above the primary seal and cover the annular space between the floating roof and the wall of the tank. The total area of the gaps between the tank wall and the secondary seal shall not exceed 21.2 square centimeters per meter of tank diameter, and the width of any portion of these gaps shall not exceed 1.3 centimeters.

(iii) The external floating roof shall meet the following specifications:

(A) Except for automatic bleeder vents, vacuum breaker

vents, and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface.

(B) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid.

(C) Each access hatch and each gauge float well shall be equipped with a cover designed to be bolted or fastened when the cover is secured in the closed position.

(D) Each automatic bleeder vent and each rim space vent shall be equipped with a gasket.

(E) Each roof drain that empties into the liquid managed in the tank shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(F) Each unslotted and slotted guide pole well shall be equipped with a gasketed sliding cover or a flexible fabric sleeve seal.

(G) Each unslotted guide pole shall be equipped with a gasketed cap on the end of the pole.

(H) Each slotted guide pole shall be equipped with a gasketed float or other device which closes off the liquid surface from the atmosphere.

(I) Each gauge hatch and each sample well shall be equipped with a gasketed cover.

(2) The remanufacturer or other person that stores or treats the hazardous secondary material shall operate the tank in accordance with the following requirements:

(i) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be completed as soon as practical.

(ii) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof shall be secured and maintained in a closed position at all times except when the closure device shall be open for access.

(iii) Covers on each access hatch and each gauge float well shall be bolted or fastened when secured in the closed position.

(iv) Automatic bleeder vents shall be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

(v) Rim space vents shall be set to open only at those times that the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

(vi) The cap on the end of each unslotted guide pole shall be secured in the closed position at all times except when measuring the level or collecting samples of the liquid in the tank.

(vii) The cover on each gauge hatch or sample well shall be secured in the closed position at all times except when the hatch or well shall be opened for access.

(viii) Both the primary seal and the secondary seal shall completely cover the annular space between the external floating roof and the wall of the tank in a continuous fashion except during inspections.

(3) The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect the external floating roof in accordance with the procedures specified as follows:

(i) The remanufacturer or other person that stores or treats the hazardous secondary material shall measure the external floating roof seal gaps in accordance with the following requirements:

(A) The remanufacturer or other person that stores or treats the hazardous secondary material shall perform measurements of gaps between the tank wall and the primary seal within 60 calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every 5 years.

(B) The remanufacturer or other person that stores or treats

the hazardous secondary material shall perform measurements of gaps between the tank wall and the secondary seal within 60 calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every year.

(C) If a tank ceases to hold hazardous secondary material for a period of 1 year or more, subsequent introduction of hazardous secondary material into the tank shall be considered an initial operation for the purposes of Subsections R315-261-1084(f)(3)(i)(A) and (B).

(D) The remanufacturer or other person that stores or treats the hazardous secondary material shall determine the total surface area of gaps in the primary seal and in the secondary seal individually using the following procedure:

(I) The seal gap measurements shall be performed at one or more floating roof levels when the roof is floating off the roof supports.

(II) Seal gaps, if any, shall be measured around the entire perimeter of the floating roof in each place where a 0.32-centimeter diameter uniform probe passes freely, without forcing or binding against the seal, between the seal and the wall of the tank and measure the circumferential distance of each such location.

(III) For a seal gap measured under Subsection R315-261-1084(f)(3), the gap surface area shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(IV) The total gap area shall be calculated by adding the gap surface areas determined for each identified gap location for the primary seal and the secondary seal individually, and then dividing the sum for each seal type by the nominal diameter of the tank. These total gap areas for the primary seal and secondary seal are then compared to the respective standards for the seal type as specified in Subsection R315-261-1084(f)(1)(ii).

(E) In the event that the seal gap measurements do not conform to the specifications in Subsection R315-261-1084(f)(1)(ii), the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of Subsection R315-261-1084(k).

(F) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection in accordance with the requirements specified in Subsection R315-261-1089(b).

(ii) The remanufacturer or other person that stores or treats the hazardous secondary material shall visually inspect the external floating roof in accordance with the following requirements:

(A) The floating roof and its closure devices shall be visually inspected by the remanufacturer or other person that stores or treats the hazardous secondary material to check for defects that could result in air pollutant emissions. Defects include, but are not limited to: Holes, tears, or other openings in the rim seal or seal fabric of the floating roof; a rim seal detached from the floating roof; all or a portion of the floating roof deck being submerged below the surface of the liquid in the tank; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(B) The remanufacturer or other person that stores or treats the hazardous secondary material shall perform an initial inspection of the external floating roof and its closure devices on or before the date that the tank becomes subject to Section R315-261-1084. Thereafter, the remanufacturer or other person that stores or treats the hazardous secondary material shall perform the inspections at least once every year except for the special conditions provided for in Subsection R315-261-1084(l).

(C) In the event that a defect is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of Subsection R315-261-1084(k).

(D) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection in accordance with the requirements specified in Subsection R315-261-1089(b).

(iii) Prior to each inspection required by Subsection R315-261-1084(f)(3)(i) or (ii), the remanufacturer or other person that stores or treats the hazardous secondary material shall notify the Director in advance of each inspection to provide the Director with the opportunity to have an observer present during the inspection. The remanufacturer or other person that stores or treats the hazardous secondary material shall notify the Director of the date and location of the inspection as follows:

(A) Prior to each inspection to measure external floating roof seal gaps as required under Subsection R315-261-1084(f)(3)(i), written notification shall be prepared and sent by the remanufacturer or other person that stores or treats the hazardous secondary material so that it is received by the Director at least 30 calendar days before the date the measurements are scheduled to be performed.

(B) Prior to each visual inspection of an external floating roof in a tank that has been emptied and degassed, written notification shall be prepared and sent by the remanufacturer or other person that stores or treats the hazardous secondary material so that it is received by the Director at least 30 calendar days before refilling the tank except when an inspection is not planned as provided for in Subsection R315-261-1084(f)(3)(iii)(C).

(C) When a visual inspection is not planned and the remanufacturer or other person that stores or treats the hazardous secondary material could not have known about the inspection 30 calendar days before refilling the tank, the owner or operator shall notify the Director as soon as possible, but no later than seven calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the Director at least seven calendar days before refilling the tank.

(4) Safety devices, as defined in Section R315-261-1081, may be installed and operated as necessary on any tank complying with the requirements of Subsection R315-261-1084(f).

(g) The remanufacturer or other person that stores or treats the hazardous secondary material who controls air pollutant emissions from a tank by venting the tank to a control device shall meet the requirements specified in Subsections R315-261-1084(g)(1) through (3).

(1) The tank shall be covered by a fixed roof and vented directly through a closed-vent system to a control device in accordance with the following requirements:

(i) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the tank.

(ii) Each opening in the fixed roof not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace underneath the fixed roof is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the fixed roof is equal to or greater than atmospheric

pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions.

(iii) The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous secondary material to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: Organic vapor permeability, the effects of any contact with the liquid and its vapor managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

(iv) The closed-vent system and control device shall be designed and operated in accordance with the requirements of Section R315-261-1087.

(2) Whenever a hazardous secondary material is in the tank, the fixed roof shall be installed with each closure device secured in the closed position and the vapor headspace underneath the fixed roof vented to the control device except as follows:

(i) Venting to the control device is not required, and opening of closure devices or removal of the fixed roof is allowed at the following times:

(A) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

(B) To remove accumulated sludge or other residues from the bottom of a tank.

(ii) Opening of a safety device, as defined in Section R315-261-1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(3) The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect and monitor the air emission control equipment in accordance with the following procedures:

(i) The fixed roof and its closure devices shall be visually inspected by the remanufacturer or other person that stores or treats the hazardous secondary material to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The closed-vent system and control device shall be inspected and monitored by the remanufacturer or other person that stores or treats the hazardous secondary material in accordance with the procedures specified in Section R315-261-1087.

(iii) The remanufacturer or other person that stores or treats the hazardous secondary material shall perform an initial inspection of the air emission control equipment on or before the date that the tank becomes subject to Section R315-261-1084. Thereafter, the remanufacturer or other person that stores or treats the hazardous secondary material shall perform the inspections at least once every year except for the special conditions provided for in Subsection R315-261-1084(l).

(iv) In the event that a defect is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the

requirements of Subsection R315-261-1084(k).

(v) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection in accordance with the requirements specified in Subsection R315-261-1089(b).

(h) The remanufacturer or other person that stores or treats the hazardous secondary material who controls air pollutant emissions by using a pressure tank shall meet the following requirements.

(1) The tank shall be designed not to vent to the atmosphere as a result of compression of the vapor headspace in the tank during filling of the tank to its design capacity.

(2) All tank openings shall be equipped with closure devices designed to operate with no detectable organic emissions as determined using the procedure specified in Subsection R315-261-1083(d).

(3) Whenever a hazardous secondary material is in the tank, the tank shall be operated as a closed system that does not vent to the atmosphere except under either of the following conditions as specified in Subsection R315-261-1084(h)(3)(i) or (h)(3)(ii).

(i) At those times when opening of a safety device, as defined in Section R315-261-1081, is required to avoid an unsafe condition.

(ii) At those times when purging of inerts from the tank is required and the purge stream is routed to a closed-vent system and control device designed and operated in accordance with the requirements of Section R315-261-1087.

(i) The remanufacturer or other person that stores or treats the hazardous secondary material who controls air pollutant emissions by using an enclosure vented through a closed-vent system to an enclosed combustion control device shall meet the requirements specified in Subsections R315-261-1084(i)(1) through (4).

(1) The tank shall be located inside an enclosure. The enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The remanufacturer or other person that stores or treats the hazardous secondary material shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.

(2) The enclosure shall be vented through a closed-vent system to an enclosed combustion control device that is designed and operated in accordance with the standards for either a vapor incinerator, boiler, or process heater specified in Section R315-261-1087.

(3) Safety devices, as defined in Section R315-261-1081, may be installed and operated as necessary on any enclosure, closed-vent system, or control device used to comply with the requirements of Subsections R315-261-1084(i)(1) and (2).

(4) The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect and monitor the closed-vent system and control device as specified in Section R315-261-1087.

(j) The remanufacturer or other person that stores or treats the hazardous secondary material shall transfer hazardous secondary material to a tank subject to Section R315-261-1084 in accordance with the following requirements:

(1) Transfer of hazardous secondary material, except as provided in Subsection R315-261-1084(j)(2), to the tank from another tank subject to Section R315-261-1084 shall be

conducted using continuous hard-piping or another closed system that does not allow exposure of the hazardous secondary material to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of 40 CFR part 63, subpart RR - National Emission Standards for Individual Drain Systems.

(2) The requirements of Subsection R315-261-1084(j)(1) do not apply when transferring a hazardous secondary material to the tank under any of the following conditions:

(i) The hazardous secondary material meets the average VO concentration conditions specified in Subsection R315-261-1082(c)(1) at the point of material origination.

(ii) The hazardous secondary material has been treated by an organic destruction or removal process to meet the requirements in Subsection R315-261-1082(c)(2).

(iii) The hazardous secondary material meets the requirements of Subsection R315-261-1082(c)(4).

(k) The remanufacturer or other person that stores or treats the hazardous secondary material shall repair each defect detected during an inspection performed in accordance with the requirements of Subsection R315-261-1084(c)(4), (e)(3), (f)(3), or (g)(3) as follows:

(1) The remanufacturer or other person that stores or treats the hazardous secondary material shall make first efforts at repair of the defect no later than 5 calendar days after detection, and repair shall be completed as soon as possible but no later than 45 calendar days after detection except as provided in Subsection R315-261-1084(k)(2).

(2) Repair of a defect may be delayed beyond 45 calendar days if the remanufacturer or other person that stores or treats the hazardous secondary material determines that repair of the defect requires emptying or temporary removal from service of the tank and no alternative tank capacity is available at the site to accept the hazardous secondary material normally managed in the tank. In this case, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect the next time the process or unit that is generating the hazardous secondary material managed in the tank stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

(l) Following the initial inspection and monitoring of the cover as required by the applicable provisions of Sections R315-261-1080 through 1089, subsequent inspection and monitoring may be performed at intervals longer than 1 year under the following special conditions:

(1) In the case when inspecting or monitoring the cover would expose a worker to dangerous, hazardous, or other unsafe conditions, then the remanufacturer or other person that stores or treats the hazardous secondary material may designate a cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:

(i) Prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required.

(ii) Develop and implement a written plan and schedule to inspect and monitor the cover, using the procedures specified in the applicable section of Sections R315-261-1080 through 1089, as frequently as practicable during those times when a worker can safely access the cover.

(2) In the case when a tank is buried partially or entirely underground, a remanufacturer or other person that stores or treats the hazardous secondary material is required to inspect and monitor, as required by the applicable provisions of Section R315-261-1084, only those portions of the tank cover and those connections to the tank, e.g., fill ports, access hatches, gauge wells, etc., that are located on or above the ground surface.

R315-261-1086. Air Emission Standards for Tanks and

Containers - Standards: Containers.

(a) Applicability. The provisions of Section R315-261-1086 apply to the control of air pollutant emissions from containers for which Subsection R315-261-1086(b) references the use Section R315-261-1086 for such air emission control.

(b) General requirements.

(1) The remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from each container subject to Section R315-261-1086 in accordance with the following requirements, as applicable to the container.

(i) For a container having a design capacity greater than 0.1 m³ and less than or equal to 0.46 m³, the remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in Subsection R315-261-1086(c).

(ii) For a container having a design capacity greater than 0.46 m³ that is not in light material service, the remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in Subsection R315-261-1086(c).

(iii) For a container having a design capacity greater than 0.46 m³ that is in light material service, the remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from the container in accordance with the Container Level 2 standards specified in Subsection R315-261-1086(d).

(c) Container Level 1 standards.

(1) A container using Container Level 1 controls is one of the following:

(i) A container that meets the applicable U.S. Department of Transportation regulations on packaging hazardous materials for transportation as specified in Subsection R315-261-1086(f).

(ii) A container equipped with a cover and closure devices that form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the container, e.g., a lid on a drum or a suitably secured tarp on a roll-off box, or may be an integral part of the container structural design, e.g., a "portable tank" or bulk cargo container equipped with a screw-type cap.

(iii) An open-top container in which an organic-vapor suppressing barrier is placed on or over the hazardous secondary material in the container such that no hazardous secondary material is exposed to the atmosphere. One example of such a barrier is application of a suitable organic-vapor suppressing foam.

(2) A container used to meet the requirements of Subsection R315-261-1086(c)(1)(ii) or (iii) shall be equipped with covers and closure devices, as applicable to the container, that are composed of suitable materials to minimize exposure of the hazardous secondary material to the atmosphere and to maintain the equipment integrity, for as long as the container is in service. Factors to be considered in selecting the materials of construction and designing the cover and closure devices shall include: Organic vapor permeability; the effects of contact with the hazardous secondary material or its vapor managed in the container; the effects of outdoor exposure of the closure device or cover material to wind, moisture, and sunlight; and the operating practices for which the container is intended to be used.

(3) Whenever a hazardous secondary material is in a container using Container Level 1 controls, the remanufacturer or other person that stores or treats the hazardous secondary material shall install all covers and closure devices for the container, as applicable to the container, and secure and

maintain each closure device in the closed position except as follows:

(i) Opening of a closure device or cover is allowed for the purpose of adding hazardous secondary material or other material to the container as follows:

(A) In the case when the container is filled to the intended final level in one continuous operation, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

(B) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the hazardous secondary material being added to the container, whichever condition occurs first.

(ii) Opening of a closure device or cover is allowed for the purpose of removing hazardous secondary material from the container as follows:

(A) For the purpose of meeting the requirements of Section R315-261-1086, an empty hazardous secondary material container may be open to the atmosphere at any time, i.e., covers and closure devices on such a container are not required to be secured in the closed position.

(B) In the case when discrete quantities or batches of material are removed from the container, but the container is not an empty hazardous secondary material container, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

(iii) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous secondary material. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

(iv) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the remanufacturer or other persons that stores or treats the hazardous secondary material based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or

other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

(v) Opening of a safety device, as defined in 40 CFR 261.1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(4) The remanufacturer or other person that stores or treats the hazardous secondary material using containers with Container Level 1 controls shall inspect the containers and their covers and closure devices as follows:

(i) In the case when a hazardous secondary material already is in the container at the time the remanufacturer or other person that stores or treats the hazardous secondary material first accepts possession of the container at the facility and the container is not emptied within 24 hours after the container is accepted at the facility, i.e., is not an empty hazardous secondary material container, the remanufacturer or other person that stores or treats the hazardous secondary material shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection shall be conducted on or before the date that the container is accepted at the facility, i.e., the date the container becomes subject to the container standards of Section R315-261-1086.

(ii) In the case when a container used for managing hazardous secondary material remains at the facility for a period of 1 year or more, the remanufacturer or other person that stores or treats the hazardous secondary material shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of Subsection R315-261-1086(c)(4)(iii).

(iii) When a defect is detected for the container, cover, or closure devices, the remanufacturer or other person that stores or treats the hazardous secondary material shall make first efforts at repair of the defect no later than 24 hours after detection and repair shall be completed as soon as possible but no later than 5 calendar days after detection. If repair of a defect cannot be completed within 5 calendar days, then the hazardous secondary material shall be removed from the container and the container shall not be used to manage hazardous secondary material until the defect is repaired.

(5) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain at the facility a copy of the procedure used to determine that containers with capacity of 0.46 m³ or greater, which do not meet applicable U.S. Department of Transportation regulations as specified in Subsection R315-261-1086(f), are not managing hazardous secondary material in light material service.

(d) Container Level 2 standards.

(1) A container using Container Level 2 controls is one of the following:

(i) A container that meets the applicable U.S. Department of Transportation regulations on packaging hazardous materials for transportation as specified in Subsection R315-261-1086(f).

(ii) A container that operates with no detectable organic emissions as defined in Section R315-261-1081 and determined in accordance with the procedure specified in Subsection R315-261-1086(g).

(iii) A container that has been demonstrated within the preceding 12 months to be vapor-tight by using 40 CFR part 60, appendix A, Method 27 in accordance with the procedure specified in Subsection R315-261-1086(h).

(2) Transfer of hazardous secondary material in or out of a container using Container Level 2 controls shall be conducted in such a manner as to minimize exposure of the hazardous secondary material to the atmosphere, to the extent practical, considering the physical properties of the hazardous secondary material and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that the Director considers to meet the requirements of Subsection R315-261-1086(d) include using any one of the following: a submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous secondary material is filled and subsequently purging the transfer line before removing it from the container opening.

(3) Whenever a hazardous secondary material is in a container using Container Level 2 controls, the remanufacturer or other person that stores or treats the hazardous secondary material shall install all covers and closure devices for the container, and secure and maintain each closure device in the closed position except as follows:

(i) Opening of a closure device or cover is allowed for the purpose of adding hazardous secondary material or other material to the container as follows:

(A) In the case when the container is filled to the intended final level in one continuous operation, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

(B) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

(ii) Opening of a closure device or cover is allowed for the purpose of removing hazardous secondary material from the container as follows:

(A) For the purpose of meeting the requirements of Section R315-261-1086, an empty hazardous secondary material container may be open to the atmosphere at any time, i.e., covers and closure devices are not required to be secured in the closed position on an empty container.

(B) In the case when discrete quantities or batches of material are removed from the container, but the container is not an empty hazardous secondary materials container, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

(iii) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine

activities other than transfer of hazardous secondary material. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

(iv) Opening of a spring-loaded, pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emission when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the remanufacturer or other person that stores or treats the hazardous secondary material based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

(v) Opening of a safety device, as defined in Section R315-261-1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(4) The remanufacturer or other person that stores or treats the hazardous secondary material using containers with Container Level 2 controls shall inspect the containers and their covers and closure devices as follows:

(i) In the case when a hazardous secondary material already is in the container at the time the remanufacturer or other person that stores or treats the hazardous secondary material first accepts possession of the container at the facility and the container is not emptied within 24 hours after the container is accepted at the facility, i.e., is not an empty hazardous secondary material container, the remanufacturer or other person that stores or treats the hazardous secondary material shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection shall be conducted on or before the date that the container is accepted at the facility, i.e., the date the container becomes subject to the container standards of Section R315-261-1086.

(ii) In the case when a container used for managing hazardous secondary material remains at the facility for a period of 1 year or more, the remanufacturer or other person that stores or treats the hazardous secondary material shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of Subsection R315-261-1086(d)(4)(iii).

(iii) When a defect is detected for the container, cover, or closure devices, the remanufacturer or other person that stores or treats the hazardous secondary material shall make first

efforts at repair of the defect no later than 24 hours after detection, and repair shall be completed as soon as possible but no later than 5 calendar days after detection. If repair of a defect cannot be completed within 5 calendar days, then the hazardous secondary material shall be removed from the container and the container shall not be used to manage hazardous secondary material until the defect is repaired.

(e) Container Level 3 standards.

(1) A container using Container Level 3 controls is one of the following:

(i) A container that is vented directly through a closed-vent system to a control device in accordance with the requirements of Subsection R315-261-1086(e)(2)(ii).

(ii) A container that is vented inside an enclosure which is exhausted through a closed-vent system to a control device in accordance with the requirements of Subsections R315-261-1086(e)(2)(i) and (ii).

(2) The remanufacturer or other person that stores or treats the hazardous secondary material shall meet the following requirements, as applicable to the type of air emission control equipment selected by the remanufacturer or other person that stores or treats the hazardous secondary material:

(i) The container enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of containers through the enclosure by conveyor or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The remanufacturer or other person that stores or treats the hazardous secondary material shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.

(ii) The closed-vent system and control device shall be designed and operated in accordance with the requirements of Section R315-261-1087.

(3) Safety devices, as defined in Section R315-261-1081, may be installed and operated as necessary on any container, enclosure, closed-vent system, or control device used to comply with the requirements of Subsection R315-261-1086(e)(1).

(4) Remanufacturers or other persons that store or treat the hazardous secondary material using Container Level 3 controls in accordance with the provisions of Sections R315-261-1080 through 1089 shall inspect and monitor the closed-vent systems and control devices as specified in Section R315-261-1087.

(5) Remanufacturers or other persons that store or treat the hazardous secondary material that use Container Level 3 controls in accordance with the provisions of Sections R315-261-1080 through 1089 shall prepare and maintain the records specified in Subsection R315-261-1089(d).

(6) Transfer of hazardous secondary material in or out of a container using Container Level 3 controls shall be conducted in such a manner as to minimize exposure of the hazardous secondary material to the atmosphere, to the extent practical, considering the physical properties of the hazardous secondary material and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that the Director considers to meet the requirements of Subsection R315-261-1086(e) include using any one of the following: a submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous secondary

material is filled and subsequently purging the transfer line before removing it from the container opening.

(f) For the purpose of compliance with Subsection R315-261-1086(c)(1)(i) or (d)(1)(i), containers shall be used that meet the applicable U.S. Department of Transportation regulations on packaging hazardous materials for transportation as follows:

(1) The container meets the applicable requirements specified in 49 CFR part 178 or part 179.

(2) Hazardous secondary material is managed in the container in accordance with the applicable requirements specified in 49 CFR part 107, subpart B and 49 CFR parts 172, 173, and 180.

(3) For the purpose of complying with Sections R315-261-1080 through 1089, no exceptions to the 49 CFR part 178 or part 179 regulations are allowed.

(g) To determine compliance with the no detectable organic emissions requirement of Subsection R315-261-1086(d)(1)(ii), the procedure specified in Subsection R315-261-1083(d) shall be used.

(1) Each potential leak interface, i.e., a location where organic vapor leakage could occur, on the container, its cover, and associated closure devices, as applicable to the container, shall be checked. Potential leak interfaces that are associated with containers include, but are not limited to: the interface of the cover rim and the container wall; the periphery of any opening on the container or container cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.

(2) The test shall be performed when the container is filled with a material having a volatile organic concentration representative of the range of volatile organic concentrations for the hazardous secondary materials expected to be managed in this type of container. During the test, the container cover and closure devices shall be secured in the closed position.

(h) Procedure for determining a container to be vapor-tight using Method 27 of 40 CFR part 60, appendix A for the purpose of complying with Subsection R315-261-1086(d)(1)(iii).

(1) The test shall be performed in accordance with Method 27 of 40 CFR part 60, appendix A.

(2) A pressure measurement device shall be used that has a precision of +/- 2.5 mm water and that is capable of measuring above the pressure at which the container is to be tested for vapor tightness.

(3) If the test results determined by Method 27 indicate that the container sustains a pressure change less than or equal to 750 Pascals within 5 minutes after it is pressurized to a minimum of 4,500 Pascals, then the container is determined to be vapor-tight.

R315-261-1087. Air Emission Standards for Tanks and Containers - Standards: Closed-Vent Systems and Control Devices.

(a) Section R315-261-1087 applies to each closed-vent system and control device installed and operated by the remanufacturer or other person who stores or treats the hazardous secondary material to control air emissions in accordance with standards of Sections R315-261-1080 through 1089.

(b) The closed-vent system shall meet the following requirements:

(1) The closed-vent system shall route the gases, vapors, and fumes emitted from the hazardous secondary material in the hazardous secondary material management unit to a control device that meets the requirements specified in Subsection R315-261-1087(c).

(2) The closed-vent system shall be designed and operated in accordance with the requirements specified in Subsection R315-261-1033(k).

(3) In the case when the closed-vent system includes

bypass devices that could be used to divert the gas or vapor stream to the atmosphere before entering the control device, each bypass device shall be equipped with either a flow indicator as specified in Subsection R315-261-1087(b)(3)(i) or a seal or locking device as specified in Subsection R315-261-1087(b)(3)(ii). For the purpose of complying with Subsection R315-261-1087(b)(3), low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, spring loaded pressure relief valves, and other fittings used for safety purposes are not considered to be bypass devices.

(i) If a flow indicator is used to comply with Subsection R315-261-1087(b)(3), the indicator shall be installed at the inlet to the bypass line used to divert gases and vapors from the closed-vent system to the atmosphere at a point upstream of the control device inlet. For Subsection R315-261-1087(b), a flow indicator means a device which indicates the presence of either gas or vapor flow in the bypass line.

(ii) If a seal or locking device is used to comply with Subsection R315-261-1087(b)(3), the device shall be placed on the mechanism by which the bypass device position is controlled, e.g., valve handle, damper lever, when the bypass device is in the closed position such that the bypass device cannot be opened without breaking the seal or removing the lock. Examples of such devices include, but are not limited to, a car-seal or a lock-and-key configuration valve. The remanufacturer or other person that stores or treats the hazardous secondary material shall visually inspect the seal or closure mechanism at least once every month to verify that the bypass mechanism is maintained in the closed position.

(4) The closed-vent system shall be inspected and monitored by the remanufacturer or other person that stores or treats the hazardous secondary material in accordance with the procedure specified in Subsection R315-261-1033(l).

(c) The control device shall meet the following requirements:

(1) The control device shall be one of the following devices:

(i) A control device designed and operated to reduce the total organic content of the inlet vapor stream vented to the control device by at least 95 percent by weight;

(ii) An enclosed combustion device designed and operated in accordance with the requirements of Subsection R315-261-1033(c); or

(iii) A flare designed and operated in accordance with the requirements of Subsection R315-261-1033(d).

(2) The remanufacturer or other person that stores or treats the hazardous secondary material who elects to use a closed-vent system and control device to comply with the requirements Section R315-261-1087 shall comply with the requirements specified in Subsections R315-261-1087(c)(2)(i) through (vi).

(i) Periods of planned routine maintenance of the control device, during which the control device does not meet the specifications of Subsection R315-261-1087(c)(1)(i), (ii), or (iii), as applicable, shall not exceed 240 hours per year.

(ii) The specifications and requirements in Subsections R315-261-1087(c)(1)(i) through (iii) for control devices do not apply during periods of planned routine maintenance.

(iii) The specifications and requirements in Subsections R315-261-1087(c)(1)(i) through (iii) for control devices do not apply during a control device system malfunction.

(iv) The remanufacturer or other person that stores or treats the hazardous secondary material shall demonstrate compliance with the requirements of Subsection R315-261-1087(c)(2)(i), i.e., planned routine maintenance of a control device, during which the control device does not meet the specifications of Subsection R315-261-1087(c)(1)(i), (ii), or (iii), as applicable, shall not exceed 240 hours per year, by recording the information specified in Subsection R315-261-1089(e)(1)(v).

(v) The remanufacturer or other person that stores or treats the hazardous secondary material shall correct control device system malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of air pollutants.

(vi) The remanufacturer or other person that stores or treats the hazardous secondary material shall operate the closed-vent system such that gases, vapors, or fumes are not actively vented to the control device during periods of planned maintenance or control device system malfunction, i.e., periods when the control device is not operating or not operating normally, except in cases when it is necessary to vent the gases, vapors, and/or fumes to avoid an unsafe condition or to implement malfunction corrective actions or planned maintenance actions.

(3) The remanufacturer or other person that stores or treats the hazardous secondary material using a carbon adsorption system to comply with Subsection R315-261-1087(c)(1) shall operate and maintain the control device in accordance with the following requirements:

(i) Following the initial startup of the control device, all activated carbon in the control device shall be replaced with fresh carbon on a regular basis in accordance with the requirements of Subsection R315-261-1033(g) or (h).

(ii) All carbon that is hazardous waste and that is removed from the control device shall be managed in accordance with the requirements of Subsection R315-261-1033(n), regardless of the average volatile organic concentration of the carbon.

(4) A remanufacturer or other person that stores or treats the hazardous secondary material using a control device other than a thermal vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system to comply with Subsection R315-261-1087(c)(1) shall operate and maintain the control device in accordance with the requirements of Subsection R315-261-1033(j).

(5) The remanufacturer or other person that stores or treats the hazardous secondary material shall demonstrate that a control device achieves the performance requirements of Subsection R315-261-1087(c)(1) as follows:

(i) A remanufacturer or other person that stores or treats the hazardous secondary material shall demonstrate using either a performance test as specified in Subsection R315-261-1087(c)(5)(iii) or a design analysis as specified in Subsection R315-261-1087(c)(5)(iv) the performance of each control device except for the following:

(A) A flare;

(B) A boiler or process heater with a design heat input capacity of 44 megawatts or greater;

(C) A boiler or process heater into which the vent stream is introduced with the primary fuel;

(ii) A remanufacturer or other person that stores or treats the hazardous secondary material shall demonstrate the performance of each flare in accordance with the requirements specified in Subsection R315-261-1033(e).

(iii) For a performance test conducted to meet the requirements of Subsection R315-261-1087(c)(5)(i), the remanufacturer or other person that stores or treats the hazardous secondary material shall use the test methods and procedures specified in Subsections R315-261-1034(c)(1) through (4).

(iv) For a design analysis conducted to meet the requirements of Subsection R315-261-1087(c)(5)(i), the design analysis shall meet the requirements specified in Subsection R315-261-1035(b)(4)(iii).

(v) The remanufacturer or other person that stores or treats the hazardous secondary material shall demonstrate that a carbon adsorption system achieves the performance requirements of Subsection R315-261-1087(c)(1) based on the total quantity of organics vented to the atmosphere from all carbon adsorption system equipment that is used for organic

adsorption, organic desorption or carbon regeneration, organic recovery, and carbon disposal.

(6) If the remanufacturer or other person that stores or treats the hazardous secondary material and the Director do not agree on a demonstration of control device performance using a design analysis then the disagreement shall be resolved using the results of a performance test performed by the remanufacturer or other person that stores or treats the hazardous secondary material in accordance with the requirements of Subsection R315-261-1087(c)(5)(iii). The Director may choose to have an authorized representative observe the performance test.

(7) The closed-vent system and control device shall be inspected and monitored by the remanufacturer or other person that stores or treats the hazardous secondary material in accordance with the procedures specified in Subsections R315-261-1033(f)(2) and (1). The readings from each monitoring device required by Subsection R315-261-1033(f)(2) shall be inspected at least once each operating day to check control device operation. Any necessary corrective measures shall be immediately implemented to ensure the control device is operated in compliance with the requirements Section R315-261-1087.

R315-261-1088. Air Emission Standards for Tanks and Containers - Inspection and Monitoring Requirements.

(a) The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect and monitor air emission control equipment used to comply with Sections R315-261-1080 through 1089 in accordance with the applicable requirements specified in Sections R315-261-1084 through 1087.

(b) The remanufacture or other person that stores or treats the hazardous secondary material shall develop and implement a written plan and schedule to perform the inspections and monitoring required by Subsection R315-261-1088(a). The remanufacturer or other person that stores or treats the hazardous secondary material shall keep the plan and schedule at the facility.

R315-261-1089. Air Emission Standards for Tanks and Containers - Recordkeeping Requirements.

(a) Each remanufacturer or other person that stores or treats the hazardous secondary material subject to requirements of Sections R315-261-1080 through 1089 shall record and maintain the information specified in Subsections R315-261-1089(b) through (j), as applicable to the facility. Except for air emission control equipment design documentation and information required by Subsections R315-261-1089(i) and (j), records required by Section R315-261-1089 shall be maintained at the facility for a minimum of 3 years. Air emission control equipment design documentation shall be maintained at the facility until the air emission control equipment is replaced or otherwise no longer in service. Information required by Subsections R315-261-1089(i) and (j) shall be maintained at the facility for as long as the hazardous secondary material management unit is not using air emission controls specified in Sections R315-261-1084 through 1087 in accordance with the conditions specified in Subsection R315-261-1080(b)(7) or (d), respectively.

(b) The remanufacturer or other person that stores or treats the hazardous secondary material using a tank with air emission controls in accordance with the requirements of Section R315-261-1084 shall prepare and maintain records for the tank that include the following information:

(1) For each tank using air emission controls in accordance with the requirements of Section R315-261-1084, the remanufacturer or other person that stores or treats the hazardous secondary material shall record:

(i) A tank identification number (or other unique identification description as selected by the remanufacturer or other person that stores or treats the hazardous secondary material).

(ii) A record for each inspection required by Section R315-261-1084 that includes the following information:

(A) Date inspection was conducted.

(B) For each defect detected during the inspection: The location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the requirements of Section R315-261-1084, the remanufacturer or other person that stores or treats the hazardous secondary material shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(2) In addition to the information required by Subsection R315-261-1089(b)(1), the remanufacturer or other person that stores or treats the hazardous secondary material shall record the following information, as applicable to the tank:

(i) The remanufacturer or other person that stores or treats the hazardous secondary material using a fixed roof to comply with the Tank Level 1 control requirements specified in Subsection R315-261-1084(c) shall prepare and maintain records for each determination for the maximum organic vapor pressure of the hazardous secondary material in the tank performed in accordance with the requirements of Subsection R315-261-1084(c). The records shall include the date and time the samples were collected, the analysis method used, and the analysis results.

(ii) The remanufacturer or other person that stores or treats the hazardous secondary material using an internal floating roof to comply with the Tank Level 2 control requirements specified in Subsection R315-261-1084(e) shall prepare and maintain documentation describing the floating roof design.

(iii) Remanufacturer or other persons that store or treat the hazardous secondary material using an external floating roof to comply with the Tank Level 2 control requirements specified in Subsection R315-261-1084(f) shall prepare and maintain the following records:

(A) Documentation describing the floating roof design and the dimensions of the tank.

(B) Records for each seal gap inspection required by Subsection R315-261-1084(f)(3) describing the results of the seal gap measurements. The records shall include the date that the measurements were performed, the raw data obtained for the measurements, and the calculations of the total gap surface area. In the event that the seal gap measurements do not conform to the specifications in Subsection R315-261-1084(f)(1), the records shall include a description of the repairs that were made, the date the repairs were made, and the date the tank was emptied, if necessary.

(iv) Each remanufacturer or other person that stores or treats the hazardous secondary material using an enclosure to comply with the Tank Level 2 control requirements specified in Subsection R315-261-1084(i) shall prepare and maintain the following records:

(A) Records for the most recent set of calculations and measurements performed by the remanufacturer or other person that stores or treats the hazardous secondary material to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.

(B) Records required for the closed-vent system and control device in accordance with the requirements of Subsection R315-261-1089(e).

(c) Reserved

(d) The remanufacturer or other person that stores or treats the hazardous secondary material using containers with

Container Level 3 air emission controls in accordance with the requirements of Subsection R315-261-1086 shall prepare and maintain records that include the following information:

(1) Records for the most recent set of calculations and measurements performed by the remanufacturer or other person that stores or treats the hazardous secondary material to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.

(2) Records required for the closed-vent system and control device in accordance with the requirements of Subsection R315-261-1089(e).

(e) The remanufacturer or other person that stores or treats the hazardous secondary material using a closed-vent system and control device in accordance with the requirements of Subsection R315-261-1087 shall prepare and maintain records that include the following information:

(1) Documentation for the closed-vent system and control device that includes:

(i) Certification that is signed and dated by the remanufacturer or other person that stores or treats the hazardous secondary material stating that the control device is designed to operate at the performance level documented by a design analysis as specified in Subsection R315-261-1089(e)(1)(ii) or by performance tests as specified in Subsection R315-261-1089(e)(1)(iii) when the tank or container is or would be operating at capacity or the highest level reasonably expected to occur.

(ii) If a design analysis is used, then design documentation as specified in Subsection R315-261-1035(b)(4). The documentation shall include information prepared by the remanufacturer or other person that stores or treats the hazardous secondary material or provided by the control device manufacturer or vendor that describes the control device design in accordance with Subsection R315-261-1035(b)(4)(iii) and certification by the remanufacturer or other person that stores or treats the hazardous secondary material that the control equipment meets the applicable specifications.

(iii) If performance tests are used, then a performance test plan as specified in Subsection R315-261-1035(b)(3) and all test results.

(iv) Information as required by Subsections R315-261-1035(c)(1) and 261.1035(c)(2), as applicable.

(v) A remanufacturer or other person that stores or treats the hazardous secondary material shall record, on a semiannual basis, the information specified in Subsections R315-261-1089(e)(1)(v)(A) and (B) for those planned routine maintenance operations that would require the control device not to meet the requirements of Subsection R315-261-1087(c)(1)(i), (ii), or (iii), as applicable.

(A) A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6-month period. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.

(B) A description of the planned routine maintenance that was performed for the control device during the previous 6-month period. This description shall include the type of maintenance performed and the total number of hours during those 6 months that the control device did not meet the requirements of Subsection R315-261-1087(c)(1)(i), (ii), or (iii), as applicable, due to planned routine maintenance.

(vi) A remanufacturer or other person that stores or treats the hazardous secondary material shall record the information specified in Subsections R315-261-1089(e)(1)(vi)(A) through (C) for those unexpected control device system malfunctions that would require the control device not to meet the requirements of Subsection R315-261-1087(c)(1)(i), (ii), or (iii),

as applicable.

(A) The occurrence and duration of each malfunction of the control device system.

(B) The duration of each period during a malfunction when gases, vapors, or fumes are vented from the hazardous secondary material management unit through the closed-vent system to the control device while the control device is not properly functioning.

(C) Actions taken during periods of malfunction to restore a malfunctioning control device to its normal or usual manner of operation.

(vii) Records of the management of carbon removed from a carbon adsorption system conducted in accordance with Subsection R315-261-1087(c)(3)(ii).

(f) The remanufacturer or other person that stores or treats the hazardous secondary material using a tank or container exempted under the hazardous secondary material organic concentration conditions specified in Subsections R315-261-1082(c)(1) or (c)(2)(i) through (vi), shall prepare and maintain at the facility records documenting the information used for each material determination, e.g., test results, measurements, calculations, and other documentation. If analysis results for material samples are used for the material determination, then the remanufacturer or other person that stores or treats the hazardous secondary material shall record the date, time, and location that each material sample is collected in accordance with applicable requirements of Section R315-261-1083.

(g) A remanufacturer or other person that stores or treats the hazardous secondary material designating a cover as "unsafe to inspect and monitor" pursuant to Subsection R315-261-1084(l) or Subsection R315-261-1085(g) shall record and keep at facility the following information: The identification numbers for hazardous secondary material management units with covers that are designated as "unsafe to inspect and monitor," the explanation for each cover stating why the cover is unsafe to inspect and monitor, and the plan and schedule for inspecting and monitoring each cover.

(h) The remanufacturer or other person that stores or treats the hazardous secondary material that is subject to Sections R315-261-1080 through 1089 and to the control device standards in 40 CFR part 60, subpart VV, or 40 CFR part 61, subpart V, may elect to demonstrate compliance with the applicable sections of Sections R315-261-1080 through 1089 by documentation either pursuant to Sections R315-261-1080 through 1089, or pursuant to the provisions of 40 CFR part 60, subpart VV or 40 CFR part 61, subpart V, to the extent that the documentation required by 40 CFR parts 60 or 61 duplicates the documentation required by Section R315-261-1089.

R315-261-1090. Appendix I to Rule R315-261 -- Representative Sampling Methods.

The methods and equipment used for sampling waste materials will vary with the form and consistency of the waste materials to be sampled. Samples collected using the sampling protocols listed below, for sampling waste with properties similar to the indicated materials, shall be considered by the Agency to be representative of the waste.

Extremely viscous liquid-ASTM Standard D140-70 Crushed or powdered material-ASTM Standard D346-75 Soil or rock-like material-ASTM Standard D420-69 Soil-like material-ASTM Standard D1452-65

Fly Ash-like material-ASTM Standard D2234-76, ASTM Standards are available from ASTM, 1916 Race St., Philadelphia, PA 19103

Containerized liquid waste-"COLIWASA."

Liquid waste in pits, ponds, lagoons, and similar reservoirs-"Pond Sampler."

This manual also contains additional information on application of these protocols.

R315-261-1090. Appendix VII to Rule R315-261-Basis for Listing Hazardous Waste.

TABLE

EPA hazardous waste No.	Hazardous constituents for which listed
F001	Tetrachloroethylene, methylene chloride trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chlorinated fluorocarbons.
F002	Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane.
F003	N.A.
F004	Cresols and cresylic acid, nitrobenzene.
F005	Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, 2-ethoxyethanol, benzene, 2-nitropropane.
F006	Cadmium, hexavalent chromium, nickel, cyanide (complexed).
F007	Cyanide (salts).
F008	Cyanide (salts).
F009	Cyanide (salts).
F010	Cyanide (salts).
F011	Cyanide (salts).
F012	Cyanide (complexed).
F019	Hexavalent chromium, cyanide (complexed).
F020	Tetra- and pentachlorodibenzo-p-dioxins; tetra and pentachlorodi-benzofurans; tri- and tetrachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F021	Penta- and hexachlorodibenzo-p- dioxins; penta- and hexachlorodibenzofurans; pentachlorophenol and its derivatives.
F022	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans.
F023	Tetra-, and pentachlorodibenzo-p-dioxins; tetra- and pentachlorodibenzofurans; tri- and tetrachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F024	Chloromethane, dichloromethane, trichloromethane, carbon tetrachloride, chloroethylene, 1,1-dichloroethane, 1,2-dichloroethane, trans-1,2-dichloroethylene, 1,1-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, 1,1,1,2-tetra-chloroethane, 1,1,2,2-tetrachloroethane, tetrachloroethylene, pentachloroethane, hexachloroethane, allyl chloride (3-chloropropene), dichloropropane, dichloropropene, 2-chloro-1,3-butadiene, hexachloro-1,3-butadiene, hexachlorocyclopentadiene, hexachlorocyclohexane, benzene, chlorobenzene, dichlorobenzenes, 1,2,4-trichlorobenzene, tetrachlorobenzene, pentachlorobenzene, hexachlorobenzene, toluene, naphthalene.
F025	Chloromethane; Dichloromethane; Trichloromethane; Carbon tetrachloride; Chloroethylene; 1,1-Dichloroethane; 1,2-Dichloroethane; trans-1,2-Dichloroethylene; 1,1-Dichloroethylene; 1,1,1-Trichloroethane; 1,1,2-Trichloroethane; Trichloroethylene; 1,1,1,2-Tetrachloroethane; 1,1,2,2-Tetrachloroethane; Tetrachloroethylene; Pentachloroethane; Hexachloroethane; Allyl chloride (3-Chloropropene); Dichloropropane; Dichloropropene; 2-Chloro-1,3-butadiene; Hexachloro-1,3-butadiene; Hexachlorocyclopentadiene; Benzene; Chlorobenzene; Dichlorobenzene; 1,2,4-Trichlorobenzene; Tetrachlorobenzene; Pentachlorobenzene; Hexachlorobenzene; Toluene; Naphthalene.
F026	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans.
F027	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F028	Tetra-, penta-, and hexachlorodibenzo-p-

	dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.	K036	indeno(1,2,3-cd) pyrene, benzo(a)anthracene, dibenzo(a)anthracene, acenaphthalene. Toluene, phosphorodithioic and phosphorothioic acid esters.
F032	Benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)-anthracene, indeno(1,2,3-cd)pyrene, pentachlorophenol, arsenic, chromium, tetra-, penta-, hexa-, heptachlorodibenzo-p-dioxins, tetra-, penta-, hexa-, heptachlorodibenzofurans.	K037	Toluene, phosphorodithioic and phosphorothioic acid esters.
F034	Benz(a)anthracene, benzo(k)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, naphthalene, arsenic, chromium.	K038	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters.
F035	Arsenic, chromium, lead.	K039	Phosphorodithioic and phosphorothioic acid esters.
F037	Benzene, benzo(a)pyrene, chrysene, lead, chromium.	K040	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters.
F038	Benzene, benzo(a)pyrene, chrysene, lead, chromium.	K041	Toxaphene.
F039	All constituents for which treatment standards are specified for multi-source leachate (wastewaters and nonwastewaters) under Section R315-268-43, Table CCW.	K042	Hexachlorobenzene, ortho-dichlorobenzene.
F999	CX, GA, GB, GD, H, HD, HL, HN-1, HN-2, HN-3, HT, L, T, and VX.	K043	2,4-dichlorophenol, 2,6-dichlorophenol, 2,4,6-trichlorophenol.
K001	Pentachlorophenol, phenol, 2-chlorophenol, p-chloro-m-cresol, 2,4-dimethylphenyl, 2,4-dinitrophenol, trichlorophenols, tetrachlorophenols, 2,4-dinitrophenol, creosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benz(a)anthracene, dibenz(a)anthracene, acenaphthalene.	K044	N.A.
K002	Hexavalent chromium, lead.	K045	N.A.
K003	Hexavalent chromium, lead.	K046	Lead.
K004	Hexavalent chromium.	K047	N.A.
K005	Hexavalent chromium, lead.	K048	Hexavalent chromium, lead.
K006	Hexavalent chromium.	K049	Hexavalent chromium, lead.
K007	Cyanide (complexed), hexavalent chromium.	K050	Hexavalent chromium.
K008	Hexavalent chromium.	K051	Hexavalent chromium, lead.
K009	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid.	K052	Lead.
K010	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid, chloroacetaldehyde.	K060	Cyanide, naphthalene, phenolic compounds, arsenic.
K011	Acrylonitrile, acetonitrile, hydrocyanic acid.	K061	Hexavalent chromium, lead, cadmium.
K013	Hydrocyanic acid, acrylonitrile, acetonitrile.	K062	Hexavalent chromium, lead.
K014	Acetonitrile, acrylamide.	K069	Hexavalent chromium, lead, cadmium.
K015	Benzyl chloride, chlorobenzene, toluene, benzotrichloride.	K071	Mercury.
K016	Hexachlorobenzene, hexachlorobutadiene, carbon tetrachloride, hexachloroethane, perchloroethylene.	K073	Chloroform, carbon tetrachloride, hexachloroethane, trichloroethane, tetrachloroethylene, dichloroethylene, 1,1,2,2-tetrachloroethane.
K017	Epichlorohydrin, chloroethers (bis(chloromethyl) ether and bis (2-chloroethyl) ethers), trichloropropane, dichloropropanols.	K083	Aniline, diphenylamine, nitrobenzene, phenylenediamine.
K018	1,2-dichloroethane, trichloroethylene, hexachlorobutadiene, hexachlorobenzene.	K084	Arsenic.
K019	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride.	K085	Benzene, dichlorobenzenes, trichlorobenzenes, tetrachlorobenzenes, pentachlorobenzene, hexachlorobenzene, benzyl chloride.
K020	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride.	K086	Lead, hexavalent chromium.
K021	Antimony, carbon tetrachloride, chloroform.	K087	Phenol, naphthalene.
K022	Phenol, tars (polycyclic aromatic hydrocarbons).	K088	Cyanide (complexes).
K023	Phthalic anhydride, maleic anhydride.	K093	Phthalic anhydride, maleic anhydride.
K024	Phthalic anhydride, 1,4-naphthoquinone.	K094	Phthalic anhydride.
K025	Meta-dinitrobenzene, 2,4-dinitrotoluene.	K095	1,1,2-trichloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,1,1-trichloroethane, 1,1,2-trichloroethane.
K026	Paraldehyde, pyridines, 2-picoline.	K096	Chlordane, heptachlor.
K027	Toluene diisocyanate, toluene-2, 4-diamine.	K097	Toxaphene.
K028	1,1,1-trichloroethane, vinyl chloride.	K098	2,4-dichlorophenol, 2,4,6-trichlorophenol.
K029	1,2-dichloroethane, 1,1,1-trichloroethane, vinyl chloride, vinylidene chloride, chloroform.	K099	Hexavalent chromium, lead, cadmium.
K030	Hexachlorobenzene, hexachlorobutadiene, hexachloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, ethylene dichloride.	K100	Arsenic.
K031	Arsenic.	K101	Arsenic.
K032	Hexachlorocyclopentadiene.	K102	Aniline, nitrobenzene, phenylenediamine.
K033	Hexachlorocyclopentadiene.	K103	Aniline, benzene, diphenylamine, nitrobenzene, phenylenediamine.
K034	Hexachlorocyclopentadiene.	K104	Benzene, monochlorobenzene, dichlorobenzenes, 2,4,6-trichlorophenol.
K035	Creosote, chrysene, naphthalene, fluoranthene benzo(b) fluoranthene, benzo(a)pyrene,	K105	Mercury.
		K106	1,1-Dimethylhydrazine (UDMH).
		K107	1,1-Dimethylhydrazine (UDMH).
		K108	1,1-Dimethylhydrazine (UDMH).
		K109	1,1-Dimethylhydrazine (UDMH).
		K110	1,1-Dimethylhydrazine (UDMH).
		K111	2,4-Dinitrotoluene.
		K112	2,4-Toluenediamine, o-toluidine, p-toluidine, aniline.
		K113	2,4-Toluenediamine, o-toluidine, p-toluidine, aniline.
		K114	2,4-Toluenediamine, o-toluidine, p-toluidine.
		K115	2,4-Toluenediamine.
		K116	Carbon tetrachloride, tetrachloroethylene, chloroform, phosgene.
		K117	Ethylene dibromide.
		K118	Ethylene dibromide.
		K123	Ethylene thiourea.
		K124	Ethylene thiourea.
		K125	Ethylene thiourea.
		K126	Ethylene thiourea.
		K131	Dimethyl sulfate, methyl bromide.
		K132	Methyl bromide.
		K136	Ethylene dibromide.
		K141	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.
		K142	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene,

K143	dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.
	Benzene, benz(a)anthracene,
K144	benzo(b)fluoranthene, benzo(k)fluoranthene.
	Benzene, benz(a)anthracene, benzo(a)pyrene,
	benzo(b)fluoranthene, benzo(k)fluoranthene,
	dibenz(a,h)anthracene.
K145	Benzene, benz(a)anthracene, benzo(a)pyrene,
	dibenz(a,h)anthracene, naphthalene.
K147	Benzene, benz(a)anthracene, benzo(a)pyrene,
	benzo(b)fluoranthene, benzo(k)fluoranthene,
	dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.
K148	Benz(a)anthracene, benzo(a)pyrene,
	benzo(b)fluoranthene, benzo(k)fluoranthene,
	dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.
K149	Benzotrichloride, benzyl chloride, chloroform,
	chloromethane, chlorobenzene, 1,4-
	dichlorobenzene, hexachlorobenzene,
	pentachlorobenzene, 1,2,4,5-tetrachlorobenzene,
	toluene.
K150	Carbon tetrachloride, chloroform, chloromethane,
	1,4-dichlorobenzene, hexachlorobenzene,
	pentachlorobenzene, 1,2,4,5-tetrachlorobenzene,
	1,1,2,2-tetrachloroethane, tetrachloroethylene,
	1,2,4-trichlorobenzene.
K151	Benzene, carbon tetrachloride, chloroform,
	hexachlorobenzene, pentachlorobenzene, toluene,
	1,2,4,5-tetrachlorobenzene, tetrachloroethylene.
K156	Benomyl, carbaryl, carbendazim, carbofuran,
	carbosulfan, formaldehyde, methylene chloride,
	triethylamine.
K157	Carbon tetrachloride, formaldehyde, methyl
	chloride, methylene chloride, pyridine,
	triethylamine.
K158	Benomyl, carbendazim, carbofuran, carbosulfan,
	chloroform, methylene chloride.
K159	Benzene, butylate, eptc, molinate, pebulate,
	vernolate.
K161	Antimony, arsenic, metam-sodium, ziram.
K169	Benzene.
K170	Benzo(a)pyrene, dibenz(a,h)anthracene, benzo (a)
	anthracene, benzo (b)fluoranthene,
	benzo(k)fluoranthene, 3-methylcholanthrene, 7,
	12-dimethylbenz(a)anthracene.
K171	Benzene, arsenic.
K172	Benzene, arsenic.
K174	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
	(1,2,3,4,6,7,8-HpCDD), 1,2,3,4,6,7,8-
	Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF),
	1,2,3,4,7,8,9-Heptachlorodibenzofuran
	(1,2,3,6,7,8,9-HpCDF), HxCDDs (All
	Hexachlorodibenzo-p-dioxins), HxCDFs (All
	Hexachlorodibenzofurans), PeCDDs (All
	Pentachlorodibenzo-p-dioxins), OCDD
	(1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin,
	OCDF (1,2,3,4,6,7,8,9-Octachlorodibenzofuran),
	PeCDFs (All Pentachlorodibenzofurans), TCDDs
	(All tetrachlorodi-benzo-p-dioxins), TCDFs (All
	tetrachlorodibenzofurans).
K175	Mercury
K176	Arsenic, Lead.
K177	Antimony.
K178	Thallium.
K181	Aniline, o-anisidine, 4-chloroaniline, p-
	cresidine, 2,4-dimethylaniline, 1,2-
	phenylenediamine, 1,3-phenylenediamine.

N.A.-Waste is hazardous because it fails the test for the characteristic of ignitability, corrosivity, or reactivity.

R315-261-1092. Appendix VIII to Rule 315-261-Hazardous Constituents.

Appendix VIII to 40 CFR Part 261, 2015 Ed., is adopted and incorporated by reference, with the following addition:

(a) P999 - CX, GA, GB, GD, H, HD, HL, HN-1, HN-2, HN-3, HT, L, T, and VX.

R315-261-1093. Appendix IX to Rule 315-261-Hazardous Constituents.

Appendix IX to 40 CFR Part 261, 2015 Ed., is adopted and incorporated by reference

KEY: hazardous waste
April 15, 2016

19-6-105
19-6-106

R315. Environmental Quality, Waste Management and Radiation Control, Waste Management.

R315-262. Hazardous Waste Generator Requirements.

R315-262-10. Purpose, Scope, and Applicability.

(a) Rule R315-262 establish standards for generators of hazardous waste.

(b) Subsections R315-261-5(c) and (d) shall be used to determine the applicability of provisions of Rule R315-262 that are dependent on calculations of the quantity of hazardous waste generated per month.

(c) A generator who treats, stores, or disposes of hazardous waste on-site shall only comply with the following Subsections of Rule R315-262 with respect to that waste: Subsection R315-262-11 for determining whether or not he has a hazardous waste, Subsection R315-262-12 for obtaining an EPA identification number, Subsection R315-262-34 for accumulation of hazardous waste, Subsection R315-262-40 (c) and (d) for recordkeeping, Subsection R315-262-43 for additional reporting, and if applicable, Subsection R315-262-70 for farmers.

(d) Any person who exports or imports wastes that are considered hazardous under U.S. national procedures to or from the countries listed in Subsection R315-262.58(a)(1) for recovery shall comply with Sections R315-262-80 through 89. A waste is considered hazardous under U.S. national procedures if the waste meets the definition of hazardous waste in Section R315-261-3 and is subject to either the manifesting requirements at Sections R315-262-20 through 25 and 27, the universal waste management standards of Rule R315-273, the export requirements in the spent lead-acid battery management standards of Section R315-266-80.

(e) Any person who imports hazardous waste into the United States shall comply with the standards applicable to generators established in Rule R315-262.

(f) A farmer who generates waste pesticides which are hazardous waste and who complies with all of the requirements of Section R315-262-70 is not required to comply with other standards in Rule R315-262 or Rules R315- 270, 264, 265, or 268 with respect to such pesticides.

(g) A person who generates a hazardous waste as defined Rule R315-261 is subject to the compliance requirements and penalties prescribed in The Utah Solid and Hazardous Waste Act if he does not comply with the requirements of Rule R315-262.

(h) An owner or operator who initiates a shipment of hazardous waste from a treatment, storage, or disposal facility shall comply with the generator standards established in Rule R315-262.

Note 1: The provisions of Section R315-262-34 are applicable to the on-site accumulation of hazardous waste by generators. Therefore, the provisions of Section R315-262-34 only apply to owners or operators who are shipping hazardous waste which they generated at that facility.

Note 2: A generator who treats, stores, or disposes of hazardous waste on-site shall comply with the applicable standards and permit requirements set forth in Rules R315-264, 265, 266, 268, and 270.

- (i) Reserved
- (j) Reserved
- (k) Reserved

(l) Generators of lamps, as defined in Section R315-273-9, using a drum-top crusher, as defined in Section R315-273-9, shall meet the requirements of Subsection R315-273-13(d)(3), except for the registration requirement; and Subsections R315-273-13(d)(4) and (5).

R315-262-11. Hazardous Waste Determination.

A person who generates a solid waste, as defined in Section R315-261-2, shall determine if that waste is a hazardous waste

using the following method:

(a) He should first determine if the waste is excluded from regulation under Section R315-261-4.

(b) He shall then determine if the waste is listed as a hazardous waste in Sections R315-261-30 through 35.

Note: Even if the waste is listed, the generator still has an opportunity under Section R315-260-22 to demonstrate to the Director that the waste from his particular facility or operation is not a hazardous waste.

(c) For purposes of compliance with Rule R315-268, or if the waste is not listed in Sections R315-261-30 through 35, the generator shall then determine whether the waste is identified in Sections R315-261-20 through 24 by either:

(1) Testing the waste according to the methods set forth in Sections R315-261-20 through 24, or according to an equivalent method approved by the Board under Section R315-260-21; or

(2) Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.

(d) If the waste is determined to be hazardous, the generator shall refer to Rules R315-261, 264, 265, 266, 268, and 273 for possible exclusions or restrictions pertaining to management of the specific waste.

R315-262-12. EPA Identification Numbers.

(a) A generator shall not treat, store, dispose of, transport, or offer for transportation, hazardous waste without having received an EPA identification number from the Director.

(b) A generator who has not received an EPA identification number may obtain one by applying to the Director using EPA form 8700-12. Upon receiving the request the Director shall assign an EPA identification number to the generator.

(c) A generator shall not offer his hazardous waste to transporters or to treatment, storage, or disposal facilities that have not received an EPA identification number.

R315-262-20. General Requirements.

(a)(1) A generator who transports, or offers for transport a hazardous waste for offsite treatment, storage, or disposal, or a treatment, storage, and disposal facility who offers for transport a rejected hazardous waste load, shall prepare a Manifest (OMB Control number 2050-0039) on EPA Form 8700-22, and, if necessary, EPA Form 8700-22A, according to the instructions included in the appendix to Rule R315-262.

(2) Reserved

(3) Electronic manifest. In lieu of using the manifest form specified in Subsection R315-262-20(a)(1), a person required to prepare a manifest under Subsection R315-262-20(a)(1) may prepare and use an electronic manifest, provided that the person:

(i) Complies with the requirements in Section R315-262-24 for use of electronic manifests, and

(ii) Complies with the requirements of 40 CFR 3.10 for the reporting of electronic documents to EPA.

(b) A generator shall designate on the manifest one facility which is permitted to handle the waste described on the manifest.

(c) A generator may also designate on the manifest one alternate facility which is permitted to handle his waste in the event an emergency prevents delivery of the waste to the primary designated facility.

(d) If the transporter is unable to deliver the hazardous waste to the designated facility or the alternate facility, the generator shall either designate another facility or instruct the transporter to return the waste.

(e) The requirements of Section R315-262-20 through 27 do not apply to hazardous waste produced by generators of greater than 100 kg but less than 1000 kg in a calendar month where:

(1) The waste is reclaimed under a contractual agreement

pursuant to which:

(i) The type of waste and frequency of shipments are specified in the agreement;

(ii) The vehicle used to transport the waste to the recycling facility and to deliver regenerated material back to the generator is owned and operated by the reclaimer of the waste; and

(2) The generator maintains a copy of the reclamation agreement in his files for a period of at least three years after termination or expiration of the agreement.

(f) The requirements of Sections R315-262-20 through 27 and Subsection R315-262-32(b) do not apply to the transport of hazardous wastes on a public or private right-of-way within or along the border of contiguous property under the control of the same person, even if such contiguous property is divided by a public or private right-of-way. Notwithstanding Subsection R315-263-10(a), the generator or transporter shall comply with the requirements for transporters set forth in Sections R315-263-30 and 31 in the event of a discharge of hazardous waste on a public or private right-of-way.

R315-262-21. Manifest Tracking Numbers, Manifest Printing, and Obtaining Manifests.

(a)(1) A registrant may not print, or have printed, the manifest for use of distribution unless it has received approval from the EPA Director of the Office of Resource Conservation and Recovery to do so under Subsection R315-262-21(c) and (e).

(2) The approved registrant is responsible for ensuring that the organizations identified in its application are in compliance with the procedures of its approved application and the requirements of Section R315-262-21. The registrant is responsible for assigning manifest tracking numbers to its manifests.

(b) A registrant shall submit an initial application to the EPA Director of the Office of Resource Conservation and Recovery that contains the following information:

(1) Name and mailing address of registrant;

(2) Name, telephone number and email address of contact person;

(3) Brief description of registrant's government or business activity;

(4) EPA identification number of the registrant, if applicable;

(5) Description of the scope of the operations that the registrant plans to undertake in printing, distributing, and using its manifests, including:

(i) A description of the printing operation. The description should include an explanation of whether the registrant intends to print its manifests in-house, i.e., using its own printing establishments, or through a separate, i.e., unaffiliated, printing company. If the registrant intends to use a separate printing company to print the manifest on its behalf, the application shall identify this printing company and discuss how the registrant will oversee the company. If this includes the use of intermediaries, e.g., prime and subcontractor relationships, the role of each shall be discussed. The application shall provide the name and mailing address of each company. It also shall provide the name and telephone number of the contact person at each company.

(ii) A description of how the registrant will ensure that its organization and unaffiliated companies, if any, comply with the requirements of Section R315-262-21. The application shall discuss how the registrant will ensure that a unique manifest tracking number will be pre-printed on each manifest. The application shall describe the internal control procedures to be followed by the registrant and unaffiliated companies to ensure that numbers are tightly controlled and remain unique. In particular, the application shall describe how the registrant will assign manifest tracking numbers to its manifests. If computer

systems or other infrastructure will be used to maintain, track, or assign numbers, these should be indicated. The application shall also indicate how the printer will pre-print a unique number on each form, e.g., crash or press numbering. The application also shall explain the other quality procedures to be followed by each establishment and printing company to ensure that all required print specifications are consistently achieved and that printing violations are identified and corrected at the earliest practicable time.

(iii) An indication of whether the registrant intends to use the manifests for its own business operations or to distribute the manifests to a separate company or to the general public, e.g., for purchase.

(6) A brief description of the qualifications of the company that will print the manifest. The registrant may use readily available information to do so, e.g., corporate brochures, product samples, customer references, documentation of ISO certification, so long as such information pertains to the establishments or company being proposed to print the manifest.

(7) Proposed unique three-letter manifest tracking number suffix. If the registrant is approved to print the manifest, the registrant shall use this suffix to pre-print a unique manifest tracking number on each manifest.

(8) A signed certification by a duly authorized employee of the registrant that the organizations and companies in its application will comply with the procedures of its approved application and the requirements of Section R315-262-21 and that it will notify the EPA Director of the Office of Resource Conservation and Recovery of any duplicated manifest tracking numbers on manifests that have been used or distributed to other parties as soon as this becomes known.

(c) EPA shall review the application submitted under Subsection R315-262-21(b) and either approve it or request additional information or modification before approving it.

(d)(1) Upon EPA approval of the application under Subsection R315-262-21(c), EPA shall provide the registrant an electronic file of the manifest, continuation sheet, and manifest instructions and ask the registrant to submit three fully assembled manifests and continuation sheet samples, except as noted in Subsection R315-262-21(d)(3). The registrant's samples shall meet all of the specifications in Subsection R315-262-21(f) and be printed by the company that will print the manifest as identified in the application approved under Subsection R315-262-21(c).

(2) The registrant shall submit a description of the manifest samples as follows:

(i) Paper type, i.e., manufacturer and grade of the manifest paper;

(ii) Paper weight of each copy;

(iii) Ink color of the manifest's instructions. If screening of the ink was used, the registrant shall indicate the extent of the screening; and

(iv) Method of binding the copies.

(3) The registrant need not submit samples of the continuation sheet if it will print its continuation sheet using the same paper type, paper weight of each copy, ink color of the instructions, and binding method as its manifest form samples.

(e) EPA shall evaluate the forms and either approve the registrant to print them as proposed or request additional information or modification to them before approval. EPA shall notify the registrant of its decision by mail. The registrant cannot use or distribute its forms until EPA approves them. An approved registrant shall print the manifest and continuation sheet according to its application approved under Subsection R315-262-21(c) and the manifest specifications in Subsection R315-262-21(f). It also shall print the forms according to the paper type, paper weight, ink color of the manifest instructions and binding method of its approved forms.

(f) Paper manifests and continuation sheets shall be printed

according to the following specifications:

(1) The manifest and continuation sheet shall be printed with the exact format and appearance as EPA Forms 8700-22 and 8700-22A, respectively. However, information required to complete the manifest may be pre-printed on the manifest form.

(2) A unique manifest tracking number assigned in accordance with a numbering system approved by EPA shall be pre-printed in Item 4 of the manifest. The tracking number shall consist of a unique three-letter suffix following nine digits.

(3) The manifest and continuation sheet shall be printed on 8 1/2 x 11-inch white paper, excluding common stubs, e.g., top- or side-bound stubs. The paper shall be durable enough to withstand normal use.

(4) The manifest and continuation sheet shall be printed in black ink that can be legibly photocopied, scanned, or faxed, except that the marginal words indicating copy distribution shall be printed with a distinct ink color or with another method; e.g., white text against black background in text box, or, black text against grey background in text box; that clearly distinguishes the copy distribution notations from the other text and data entries on the form.

(5) The manifest and continuation sheet shall be printed as six-copy forms. Copy-to-copy registration shall be exact within 1/32 nd of an inch. Handwritten and typed impressions on the form shall be legible on all six copies. Copies shall be bound together by one or more common stubs that reasonably ensure that they will not become detached inadvertently during normal use.

(6) Each copy of the manifest and continuation sheet shall indicate how the copy shall be distributed, as follows:

(i) Page 1, top copy: "Designated facility to destination State, if required".

(ii) Page 2: "Designated facility to generator State, if required".

(iii) Page 3: "Designated facility to generator".

(iv) Page 4: "Designated facility's copy".

(v) Page 5: "Transporter's copy".

(vi) Page 6 (bottom copy): "Generator's initial copy".

(7) The instructions in the appendix to Rule R315-262 shall appear legibly on the back of the copies of the manifest and continuation sheet as provided in Subsection R315-262-21(f). The instructions shall not be visible through the front of the copies when photocopied or faxed.

(i) Manifest Form 8700-22.

(A) The "Instructions for Generators" on Copy 6;

(B) The "Instructions for International Shipment Block" and "Instructions for Transporters" on Copy 5; and

(C) The "Instructions for Treatment, Storage, and Disposal Facilities" on Copy 4.

(ii) Manifest Form 8700-22A.

(A) The "Instructions for Generators" on Copy 6;

(B) The "Instructions for Transporters" on Copy 5; and

(C) The "Instructions for Treatment, Storage, and Disposal Facilities" on Copy 4.

(g)(1) A generator may use manifests printed by any source so long as the source of the printed form has received approval from EPA to print the manifest under Subsections R315-262-21(c) and (e). A registered source may be a:

(i) State agency;

(ii) Commercial printer;

(iii) Hazardous waste generator, transporter or TSDF; or

(iv) Hazardous waste broker or other preparer who prepares or arranges shipments of hazardous waste for transportation.

(2) A generator shall determine whether the generator state or the consignment state for a shipment regulates any additional wastes, beyond those regulated Federally, as hazardous wastes under these states' authorized programs. Generators also shall determine whether the consignment state or generator state

requires the generator to submit any copies of the manifest to these states. In cases where the generator shall supply copies to either the generator's state or the consignment state, the generator is responsible for supplying legible photocopies of the manifest to these states.

(h)(1) If an approved registrant would like to update any of the information provided in its application approved under Subsection R315-262-21(c), e.g., to update a company phone number or name of contact person, the registrant shall revise the application and submit it to the EPA Director of the Office of Resource Conservation and Recovery, along with an indication or explanation of the update, as soon as practicable after the change occurs. The Agency either shall approve or deny the revision. If the Agency denies the revision, it shall explain the reasons for the denial, and it shall contact the registrant and request further modification before approval.

(2) If the registrant would like a new tracking number suffix, the registrant shall submit a proposed suffix to the EPA Director of the Office of Resource Conservation and Recovery, along with the reason for requesting it. The Agency shall either approve the suffix or deny the suffix and provide an explanation why it is not acceptable.

(3) If a registrant would like to change the paper type, paper weight, ink color of the manifest instructions, or binding method of its manifest or continuation sheet subsequent to approval under Subsection R315-262-21(e), then the registrant shall submit three samples of the revised form for EPA review and approval. If the approved registrant would like to use a new printer, the registrant shall submit three manifest samples printed by the new printer, along with a brief description of the printer's qualifications to print the manifest. EPA shall evaluate the manifests and either approve the registrant to print the forms as proposed or request additional information or modification to them before approval. EPA shall notify the registrant of its decision by mail. The registrant cannot use or distribute its revised forms until EPA approves them.

(i) If, subsequent to its approval under Subsection R315-262-21(e), a registrant typesets its manifest or continuation sheet instead of using the electronic file of the forms provided by EPA, it shall submit three samples of the manifest or continuation sheet to the registry for approval. EPA shall evaluate the manifests or continuation sheets and either approve the registrant to print them as proposed or request additional information or modification to them before approval. EPA shall notify the registrant of its decision by mail. The registrant cannot use or distribute its typeset forms until EPA approves them.

(j) EPA may exempt a registrant from the requirement to submit form samples under Subsection R315-262-21(d) or (h)(3) if the Agency is persuaded that a separate review of the registrant's forms would serve little purpose in informing an approval decision; e.g., a registrant certifies that it will print the manifest using the same paper type, paper weight, ink color of the instructions and binding method of the form samples approved for some other registrant. A registrant may request an exemption from EPA by indicating why an exemption is warranted.

(k) An approved registrant shall notify EPA by phone or email as soon as it becomes aware that it has duplicated tracking numbers on any manifests that have been used or distributed to other parties.

(l) If, subsequent to approval of a registrant under Subsection R315-262-21(e), EPA becomes aware that the approved paper type, paper weight, ink color of the instructions, or binding method of the registrant's form is unsatisfactory, EPA shall contact the registrant and require modifications to the form.

(m)(1) EPA may suspend and, if necessary, revoke printing privileges if we find that the registrant:

(i) Has used or distributed forms that deviate from its approved form samples in regard to paper weight, paper type, ink color of the instructions, or binding method; or

(ii) Exhibits a continuing pattern of behavior in using or distributing manifests that contain duplicate manifest tracking numbers.

(2) EPA shall send a warning letter to the registrant that specifies the date by which it shall come into compliance with the requirements. If the registrant does not come into compliance by the specified date, EPA shall send a second letter notifying the registrant that EPA has suspended or revoked its printing privileges. An approved registrant shall provide information on its printing activities to EPA if requested.

R315-262-22. Number of Copies.

The manifest consists of at least the number of copies which will provide the generator, each transporter, and the owner or operator of the designated facility with one copy each for their records and another copy to be returned to the generator.

R315-262-23. Use of the Manifest.

(a) The generator shall:

(1) Sign the manifest certification by hand; and

(2) Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest; and

(3) Retain one copy, in accordance with Subsection R315-262-40(a).

(b) The generator shall give the transporter the remaining copies of the manifest.

(c) For shipments of hazardous waste within Utah solely by water, bulk shipments only, the generator shall send three copies of the manifest dated and signed in accordance with Section R315-262-23 to the owner or operator of the designated facility or the last water, bulk shipment, transporter to handle the waste in the United States if exported by water. Copies of the manifest are not required for each transporter.

(d) For rail shipments of hazardous waste within Utah which originate at the site of generation, the generator shall send at least three copies of the manifest dated and signed in accordance with Section R315-262-23 to:

(1) The next non-rail transporter, if any; or

(2) The designated facility if transported solely by rail; or

(3) The last rail transporter to handle the waste in the United States if exported by rail.

(e) For shipments of hazardous waste to a designated facility in an authorized State which has not yet obtained federal authorization to regulate that particular waste as hazardous, the generator shall assure that the designated facility agrees to sign and return the manifest to the generator, and that any out-of-state transporter signs and forwards the manifest to the designated facility.

Note: See Subsections R315-263-20(e) and (f) for special provisions for rail or water, bulk shipment, transporters.

(f) For rejected shipments of hazardous waste or container residues contained in non-empty containers that are returned to the generator by the designated facility, following the procedures of Subsections R315-264-72(f) or 40 CFR 265.72(f), which is adopted by reference; the generator shall:

(1) Sign either:

(i) Item 20 of the new manifest if a new manifest is used for the returned shipment; or

(ii) Item 18c of the original manifest if the original manifest is used for the returned shipment;

(2) Provide the transporter a copy of the manifest;

(3) Within 30 days of delivery of the rejected shipment or container residues contained in non-empty containers, send a copy of the manifest to the designated facility that returned the shipment to the generator; and

(4) Retain at the generator's site a copy of each manifest for at least three years from the date of delivery.

R315-262-24. Use of the Electronic Manifest.

(a) Legal equivalence to paper manifests. Electronic manifests that are obtained, completed, and transmitted in accordance with Subsection R315-262-20(a)(3), and used in accordance with Section R315-262-24 in lieu of EPA Forms 8700-22 and 8700-22A are the legal equivalent of paper manifest forms bearing handwritten signatures, and satisfy for all purposes any requirement in these regulations to obtain, complete, sign, provide, use, or retain a manifest.

(1) Any requirement in these regulations to sign a manifest or manifest certification by hand, or to obtain a handwritten signature, is satisfied by signing with or obtaining a valid and enforceable electronic signature within the meaning of Section R315-262-25.

(2) Any requirement in these regulations to give, provide, send, forward, or return to another person a copy of the manifest is satisfied when an electronic manifest is transmitted to the other person by submission to the system.

(3) Any requirement in these regulations for a generator to keep or retain a copy of each manifest is satisfied by retention of a signed electronic manifest in the generator's account on the national e-Manifest system, provided that such copies are readily available for viewing and production if requested by any EPA or Utah inspector.

(4) No generator may be held liable for the inability to produce an electronic manifest for inspection under Section R315-262-24 if the generator can demonstrate that the inability to produce the electronic manifest is due exclusively to a technical difficulty with the electronic manifest system for which the generator bears no responsibility.

(b) A generator may participate in the electronic manifest system either by accessing the electronic manifest system from its own electronic equipment, or by accessing the electronic manifest system from portable equipment brought to the generator's site by the transporter who accepts the hazardous waste shipment from the generator for off-site transportation.

(c) Restriction on use of electronic manifests. A generator may prepare an electronic manifest for the tracking of hazardous waste shipments involving any RCRA hazardous waste only if it is known at the time the manifest is originated that all waste handlers named on the manifest participate in the electronic manifest system.

(d) Requirement for one printed copy. To the extent the Hazardous Materials regulation on shipping papers for carriage by public highway requires shippers of hazardous materials to supply a paper document for compliance with 49 CFR 177.817, a generator originating an electronic manifest shall also provide the initial transporter with one printed copy of the electronic manifest.

(e) Special procedures when electronic manifest is unavailable. If a generator has prepared an electronic manifest for a hazardous waste shipment, but the electronic manifest system becomes unavailable for any reason prior to the time that the initial transporter has signed electronically to acknowledge the receipt of the hazardous waste from the generator, then the generator shall obtain and complete a paper manifest and if necessary, a continuation sheet (EPA Forms 8700-22 and 8700-22A) in accordance with the manifest instructions in the appendix to Rule R315-262, and use these paper forms from this point forward in accordance with the requirements of Section R315-262-23.

(f) Special procedures for electronic signature methods undergoing tests. If a generator has prepared an electronic manifest for a hazardous waste shipment, and signs this manifest electronically using an electronic signature method which is undergoing pilot or demonstration tests aimed at demonstrating

the practicality or legal dependability of the signature method, then the generator shall also sign with an ink signature the generator/officer certification on the printed copy of the manifest provided under Subsection R315-262-24(d).

(g) Imposition of user fee. A generator who is a user of the electronic manifest may be assessed a user fee by EPA for the origination of each electronic manifest. EPA shall maintain and update from time-to-time the current schedule of electronic manifest user fees, which shall be determined based on current and projected system costs and level of use of the electronic manifest system. The current schedule of electronic manifest user fees shall be published as an appendix to Rule R315-262.

R315-262-25. Electronic Manifest Signatures.

Electronic signature methods for the e-Manifest system shall:

(a) Be a legally valid and enforceable signature under applicable EPA and other Federal requirements pertaining to electronic signatures; and

(b) Be a method that is designed and implemented in a manner that EPA considers to be as cost-effective and practical as possible for the users of the manifest.

R315-262-27. Waste Minimization Certification.

A generator who initiates a shipment of hazardous waste shall certify to one of the following statements in Item 15 of the uniform hazardous waste manifest:

(a) "I am a large quantity generator. I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment;" or

(b) "I am a small quantity generator. I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford."

R315-262-30. Packaging.

Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator shall package the waste in accordance with the applicable Department of Transportation regulations on packaging under 49 CFR parts 173, 178, and 179.

R315-262-31. Labeling.

Before transporting or offering hazardous waste for transportation off-site, a generator shall label each package in accordance with the applicable Department of Transportation regulations on hazardous materials under 49 CFR part 172.

R315-262-32. Marking.

(a) Before transporting or offering hazardous waste for transportation off-site, a generator shall mark each package of hazardous waste in accordance with the applicable Department of Transportation regulations on hazardous materials under 49 CFR part 172;

(b) Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator shall mark each container of 119 gallons or less used in such transportation with the following words and information in accordance with the requirements of 49 CFR 172.304:

HAZARDOUS WASTE-Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.

Generator's Name and Address.
Generator's EPA Identification Number.
Manifest Tracking Number.

R315-262-33. Placarding.

Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator shall placard or offer the initial transporter the appropriate placards according to Department of Transportation regulations for hazardous materials under 49 CFR part 172, subpart F.

R315-262-34. Accumulation Time.

(a) Except as provided in Subsections R315-262-34(d), (e), and (f), a generator may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, provided that:

(1) The waste is placed:

(i) In containers and the generator complies with the applicable requirements of 40 CFR 265.170 through 178, 1030 through 1049, 1050 through 1079, and 1080 through 1091, which are adopted by reference; and/or

(ii) In tanks and the generator complies with the applicable requirements of 40 CFR 265.190 through 201, 1030 through 1049, 1050 through 1079, and 1080 through 1091, which are adopted by reference, except 40 CFR 265.197(c) and 200; and/or

(iii) On drip pads and the generator complies with 40 CFR 265.440 through 445, which are adopted by reference, and maintains the following records at the facility:

(A) A description of procedures that shall be followed to ensure that all wastes are removed from the drip pad and associated collection system at least once every 90 days; and

(B) Documentation of each waste removal, including the quantity of waste removed from the drip pad and the sump or collection system and the date and time of removal; and/or

(iv) In containment buildings and the generator complies with 40 CFR 265.1100 Through 1102, which are adopted by reference, has placed its professional engineer certification that the building complies with the design standards specified in 40 CFR 265.1101, which is adopted by reference, in the facility's operating record no later than 60 days after the date of initial operation of the unit. After February 18, 1993, PE certification shall be required prior to operation of the unit. The owner or operator shall maintain the following records at the facility:

(A) A written description of procedures to ensure that each waste volume remains in the unit for no more than 90 days, a written description of the waste generation and management practices for the facility showing that they are consistent with respecting the 90 day limit, and documentation that the procedures are complied with; or

(B) Documentation that the unit is emptied at least once every 90 days. In addition, such a generator is exempt from all the requirements in 40 CFR 265.110 through 121 and 140 through 150, except for 40 CFR 265.111 and 114. 40 CFR 265 is adopted by reference in R315-265.

(2) The date upon which each period of accumulation begins is clearly marked and visible for inspection on each container;

(3) While being accumulated on-site, each container and tank is labeled or marked clearly with the words, "Hazardous Waste"; and

(4) The generator complies with the requirements for owners or operators in 40 CFR 265.16, 30 through 37, and 50 through 56, which are adopted by reference; and with all applicable requirements under Rule R315-268.

(b) A generator of 1,000 kilograms or greater of hazardous waste in a calendar month, or greater than 1 kg of acute hazardous waste listed in Section R315-261-31 or Subsection R315-261-33(e) in a calendar month, who accumulates hazardous waste or acute hazardous waste for more than 90 days is an operator of a storage facility and is subject to the requirements of Rules R315-264 and 265 and the permit requirements of Rule R315-270 unless he has been granted an

extension to the 90-day period. Such extension may be granted by the Director if hazardous wastes shall remain on-site for longer than 90 days due to unforeseen, temporary, and uncontrollable circumstances. An extension of up to 30 days may be granted at the discretion of the Director on a case-by-case basis.

(c)(1) A generator may accumulate as much as 55 gallons of hazardous waste or one quart of acutely hazardous waste listed in Section R315-261-31 or Subsection R315-261-33(e) in containers at or near any point of generation where wastes initially accumulate which is under the control of the operator of the process generating the waste, without a permit or interim status and without complying with Subsections R315-262-34(a) or (d) provided he:

(i) Complies with 40 CFR 265.171, 172, and 173(a), which are adopted by reference; and

(ii) Marks his containers either with the words "Hazardous Waste" or with other words that identify the contents of the containers.

(2) A generator who accumulates either hazardous waste or acutely hazardous waste listed in Section R315-261-31 or Subsection R315-261-33(e) in excess of the amounts listed in Subsection R315-262-34(c)(1) at or near any point of generation shall, with respect to that amount of excess waste, comply within three days with Subsection R315-262-34(a) or other applicable provisions of the rules adopted by the Waste Management and Radiation Control Board. During the three day period the generator shall continue to comply with Subsections R315-262-34(c)(1)(i) and (ii). The generator shall mark the container holding the excess accumulation of hazardous waste with the date the excess amount began accumulating.

(d) A generator who generates greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month may accumulate hazardous waste on-site for 180 days or less without a permit or without having interim status provided that:

(1) The quantity of waste accumulated on-site never exceeds 6000 kilograms;

(2) The generator complies with the requirements of 40 CFR 265.170 through 178, which are adopted by reference; except for 176 and 178;

(3) The generator complies with the requirements of 40 CFR 265.201, which is adopted by reference;

(4) The generator complies with the requirements of Subsections R315-262-34(a)(2) and (a)(3), the requirements of 40 CFR 265.30 through 35 and 37, which are adopted by reference; with all applicable requirements under Rule R315-268; and

(5) The generator complies with the following requirements:

(i) At all times there shall be at least one employee either on the premises or on call, i.e., available to respond to an emergency by reaching the facility within a short period of time, with the responsibility for coordinating all emergency response measures specified in Subsection R315-262-34(d)(5)(iv). This employee is the emergency coordinator.

(ii) The generator shall post the following information next to the telephone:

(A) The name and telephone number of the emergency coordinator;

(B) Location of fire extinguishers and spill control material, and, if present, fire alarm; and

(C) The telephone number of the fire department, unless the facility has a direct alarm.

(iii) The generator shall ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies;

(iv) The emergency coordinator or his designee shall

respond to any emergencies that arise. The applicable responses are as follows:

(A) In the event of a fire, call the fire department or attempt to extinguish it using a fire extinguisher;

(B) In the event of a spill, contain the flow of hazardous waste to the extent possible, and as soon as is practicable, clean up the hazardous waste and any contaminated materials or soil;

(C) In the event of a fire, explosion, or other release which could threaten human health outside the facility or when the generator has knowledge that a spill has reached surface water, the generator shall immediately notify the National Response Center (using their 24-hour toll free number 800/424-8802) and the Director or the 24-hour answering service at 801-536-4123. The report shall include the following information:

(1) The name, address, and U.S. EPA Identification Number of the generator;

(2) Date, time, and type of incident (e.g., spill or fire);

(3) Quantity and type of hazardous waste involved in the incident;

(4) Extent of injuries, if any; and

(5) Estimated quantity and disposition of recovered materials, if any.

(e) A generator who generates greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month and who shall transport his waste, or offer his waste for transportation, over a distance of 200 miles or more for off-site treatment, storage or disposal may accumulate hazardous waste on-site for 270 days or less without a permit or without having interim status provided that he complies with the requirements of Subsection R315-262-34(d).

(f) A generator who generates greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month and who accumulates hazardous waste in quantities exceeding 6000 kg or accumulates hazardous waste for more than 180 days; or for more than 270 days if he shall transport his waste, or offer his waste for transportation, over a distance of 200 miles or more; is an operator of a storage facility and is subject to the requirements of Rules R315-264 and 265, and the permit requirements of Rule R315-270 unless he has been granted an extension to the 180-day, or 270-day if applicable, period. Such extension may be granted by the Director if hazardous wastes shall remain on-site for longer than 180 days, or 270 days if applicable, due to unforeseen, temporary, and uncontrollable circumstances. An extension of up to 30 days may be granted at the discretion of the Director on a case-by-case basis.

(g) A generator who generates 1,000 kilograms or greater of hazardous waste per calendar month who also generates wastewater treatment sludges from electroplating operations that meet the listing description for the RCRA hazardous waste code F006, may accumulate F006 waste on-site for more than 90 days, but not more than 180 days without a permit or without having interim status provided that:

(1) The generator has implemented pollution prevention practices that reduce the amount of any hazardous substances, pollutants or contaminants entering F006 or otherwise released to the environment prior to its recycling;

(2) The F006 waste is legitimately recycled through metals recovery;

(3) No more than 20,000 kilograms of F006 waste is accumulated on-site at any one time; and

(4) The F006 waste is managed in accordance with the following:

(i) The F006 waste is placed:

(A) In containers and the generator complies with the applicable requirements of 40 CFR 265.170 through 178, 1030 through 1035, 1050 through 1064, and 1080 through 1090, which are adopted by reference; and/or

(B) In tanks and the generator complies with the applicable

requirements of 40 CFR 265.190 through 202, 1030 through 1035, 1050 through 1064, and 1080 through 1090, which are adopted by reference; except 40 CFR 265.197(c) and 200; and/or

(C) In containment buildings and the generator complies with 40 CFR 265.1100 through 1102, which are adopted by reference; and has placed its professional engineer certification that the building complies with the design standards specified in 40 CFR 265.1101, which is adopted by reference, in the facility's operating record prior to operation of the unit. The owner or operator shall maintain the following records at the facility:

(1) A written description of procedures to ensure that the F006 waste remains in the unit for no more than 180 days, a written description of the waste generation and management practices for the facility showing that they are consistent with the 180-day limit, and documentation that the generator is complying with the procedures; or

(2) Documentation that the unit is emptied at least once every 180 days.

(ii) In addition, such a generator is exempt from all the requirements in 40 CFR 265.110 through 121 and 140 through 150, which are adopted by reference; except for 40 CFR 265.111 and 114.

(iii) The date upon which each period of accumulation begins is clearly marked and visible for inspection on each container;

(iv) While being accumulated on-site, each container and tank is labeled or marked clearly with the words, "Hazardous Waste;" and

(v) The generator complies with the requirements for owners or operators in 40 CFR 265.16, 30 through 35, 37, and 50 through 56, which are adopted by reference; and Subsection R315-268-7(a)(5).

(h) A generator who generates 1,000 kilograms or greater of hazardous waste per calendar month who also generates wastewater treatment sludges from electroplating operations that meet the listing description for the RCRA hazardous waste code F006, and who shall transport this waste, or offer this waste for transportation, over a distance of 200 miles or more for off-site metals recovery, may accumulate F006 waste on-site for more than 90 days, but not more than 270 days without a permit or without having interim status if the generator complies with the requirements of Subsections R315-262-34(g)(1) through (g)(4).

(i) A generator accumulating F006 in accordance with Subsection R315-262-34(g) and (h) who accumulates F006 waste on-site for more than 180 days; or for more than 270 days if the generator shall transport this waste, or offer this waste for transportation, over a distance of 200 miles or more; or who accumulates more than 20,000 kilograms of F006 waste on-site is an operator of a storage facility and is subject to the requirements of Rules R315-264 and 265, and the permit requirements of Rule R315-270 unless the generator has been granted an extension to the 180-day, or 270-day if applicable, period or an exception to the 20,000 kilogram accumulation limit. Such extensions and exceptions may be granted by the Director if F006 waste shall remain on-site for longer than 180 days, or 270 days if applicable, or if more than 20,000 kilograms of F006 waste shall remain on-site due to unforeseen, temporary, and uncontrollable circumstances. An extension of up to 30 days or an exception to the accumulation limit may be granted at the discretion of the Director on a case-by-case basis.

(j) Reserved.

(k) Reserved.

(l) Reserved.

(m) A generator who sends a shipment of hazardous waste to a designated facility with the understanding that the designated facility can accept and manage the waste and later receives that shipment back as a rejected load or residue in

accordance with the manifest discrepancy provisions of Sections R315-264-72 or 40 CFR 265.72, which is adopted by reference, may accumulate the returned waste on-site in accordance with Subsections R315-262-34(a) and (b) or (d), (e) and (f), depending on the amount of hazardous waste on-site in that calendar month. Upon receipt of the returned shipment, the generator shall:

- (1) Sign Item 18c of the manifest, if the transporter returned the shipment using the original manifest; or
- (2) Sign Item 20 of the manifest, if the transporter returned the shipment using a new manifest.

R315-262-40. Recordkeeping.

(a) A generator shall keep a copy of each manifest signed in accordance with Subsection R315-262-23(a) for three years or until he receives a signed copy from the designated facility which received the waste. This signed copy shall be retained as a record for at least three years from the date the waste was accepted by the initial transporter.

(b) A generator shall keep a copy of each Biennial Report and Exception Report for a period of at least three years from the due date of the report.

(c) A generator shall keep records of any test results, waste analyses, or other determinations made in accordance with Section R315-262-11 for at least three years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal.

(d) The periods or retention referred to in Section R315-262-40 are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Director.

(e) Records maintained in accordance with Section R315-262-40 and any other records which the Director deems necessary to determine quantities and disposition of hazardous waste or other determinations, test results, or waste analyses made in accordance with R315-262-11 shall be available for inspection by any duly authorized officer, employee or representative of the Department or the Director as provided in R315-260-5 for a period of at least three years from the date the waste was last sent to on-site or off-site treatment, storage, or disposal facilities.

R315-262-41. Biennial Report.

(a) A generator who ships any hazardous waste off-site to a treatment, storage or disposal facility within the United States shall prepare and submit a single copy of a Biennial Report to the Regional Administrator by March 1 of each even numbered year. The Biennial Report shall be submitted on EPA Form 8700-13A, shall cover generator activities during the previous year, and shall include the following information:

- (1) The EPA identification number, name, and address of the generator;
- (2) The calendar year covered by the report;
- (3) The EPA identification number, name, and address for each off-site treatment, storage, or disposal facility in the United States to which waste was shipped during the year;
- (4) The name and EPA identification number of each transporter used during the reporting year for shipments to a treatment, storage or disposal facility within the United States;
- (5) A description, EPA hazardous waste number, from Sections R315-261-21 through 24 or 30 through 35, DOT hazard class, and quantity of each hazardous waste shipped off-site for shipments to a treatment, storage or disposal facility within the United States. This information shall be listed by EPA identification number of each such off-site facility to which waste was shipped.
- (6) A description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated.
- (7) A description of the changes in volume and toxicity of

waste actually achieved during the year in comparison to previous years to the extent such information is available for years prior to 1984.

(8) The certification signed by the generator or authorized representative.

(b) Any generator who treats, stores, or disposes of hazardous waste on-site shall submit a biennial report covering those wastes in accordance with the provisions of Rules R315-270, 264, 265, and 266. Reporting for exports of hazardous waste is not required on the Biennial Report form. A separate annual report requirement is set forth at Section R315-262-56.

R315-262-42. Exception Reporting.

(a)(1) A generator of 1,000 kilograms or greater of hazardous waste in a calendar month, or greater than 1 kg of acute hazardous waste listed in Section R315-261-31 or Subsection R315-261-33(e) in a calendar month, who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 35 days of the date the waste was accepted by the initial transporter shall contact the transporter and/or the owner or operator of the designated facility to determine the status of the hazardous waste.

(2) A generator of 1,000 kilograms or greater of hazardous waste in a calendar month, or greater than 1 kg of acute hazardous waste listed in Section R315-261-31 or Subsection R315-261-33(e) in a calendar month, shall submit an Exception Report to the Director if he has not received a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 45 days of the date the waste was accepted by the initial transporter. The Exception Report shall include:

(i) A legible copy of the manifest for which the generator does not have confirmation of delivery;

(ii) A cover letter signed by the generator or his authorized representative explaining the efforts taken to locate the hazardous waste and the results of those efforts.

(b) A generator of greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 60 days of the date the waste was accepted by the initial transporter shall submit a legible copy of the manifest, with some indication that the generator has not received confirmation of delivery, to the Director.

Note: The submission to the Director need only be a handwritten or typed note on the manifest itself, or on an attached sheet of paper, stating that the return copy was not received.

(c) For rejected shipments of hazardous waste or container residues contained in non-empty containers that are forwarded to an alternate facility by a designated facility using a new manifest, following the procedures of Subsections R315-264-72(e)(1) through (6) or 40 CFR 265.72(e)(1) through (6), which are adopted by reference; the generator shall comply with the requirements of Subsections R315-262-42(a) or (b), as applicable, for the shipment forwarding the material from the designated facility to the alternate facility instead of for the shipment from the generator to the designated facility. For purposes of Subsection R315-262-42(a) or (b) for a shipment forwarding such waste to an alternate facility by a designated facility:

(1) The copy of the manifest received by the generator shall have the handwritten signature of the owner or operator of the alternate facility in place of the signature of the owner or operator of the designated facility, and

(2) The 35/45/60-day timeframes begin the date the waste was accepted by the initial transporter forwarding the hazardous waste shipment from the designated facility to the alternate

facility.

R315-262-43. Additional Reporting.

The Director, as he deems necessary, may require generators to furnish additional reports concerning the quantities and disposition of wastes identified or listed in Rule R315-261.

R315-262-44. Special Requirements for Generators of Between 100 and 1000 kg/mo.

A generator of greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month is subject only to the following requirements in Sections R315-262-40 through 43:

- (a) Subsection R315-262-40(a), (c), and (d), recordkeeping;
- (b) Subsection R315-262-42(b), exception reporting; and
- (c) Section R315-262-43, additional reporting.

R315-262-50. Applicability.

Sections R315-262-50 through 58 establish requirements applicable to exports of hazardous waste. Except to the extent Section R315-262-58 provides otherwise, a primary exporter of hazardous waste shall comply with the special requirements of Sections R315-262-50 through 58 and a transporter transporting hazardous waste for export shall comply with applicable requirements of Rule R315-263. Section R315-262-58 sets forth the requirements of international agreements between the United States and receiving countries which establish different notice, export, and enforcement procedures for the transportation, treatment, storage and disposal of hazardous waste for shipments between the United States and those countries.

R315-262-51. Definitions.

In addition to the definitions set forth at Section R315-260-10, the following definitions apply to Sections R315-262-50 through 58:

Consignee means the ultimate treatment, storage or disposal facility in a receiving country to which the hazardous waste will be sent.

EPA Acknowledgement of Consent means the cable sent to EPA from the U.S. Embassy in a receiving country that acknowledges the written consent of the receiving country to accept the hazardous waste and describes the terms and conditions of the receiving country's consent to the shipment. Primary Exporter means any person who is required to originate the manifest for a shipment of hazardous waste in accordance with Sections R315-262-20 through 25 and 27 which specifies a treatment, storage, or disposal facility in a receiving country as the facility to which the hazardous waste will be sent and any intermediary arranging for the export.

Receiving country means a foreign country to which a hazardous waste is sent for the purpose of treatment, storage or disposal, except short-term storage incidental to transportation. Transit country means any foreign country, other than a receiving country, through which a hazardous waste is transported.

R315-262-52. General Requirements.

Exports of hazardous waste are prohibited except in compliance with the applicable requirements of Sections R315-262-50 through 58 and Rule R315-263. Exports of hazardous waste are prohibited unless:

- (a) Notification in accordance with Section R315-262-53 has been provided;
- (b) The receiving country has consented to accept the hazardous waste;
- (c) A copy of the EPA Acknowledgment of Consent to the shipment accompanies the hazardous waste shipment and,

unless exported by rail, is attached to the manifest; or shipping paper for exports by water, bulk shipment.

(d) The hazardous waste shipment conforms to the terms of the receiving country's written consent as reflected in the EPA Acknowledgment of Consent.

R315-262-53. Notification of Intent to Export.

(a) A primary exporter of hazardous waste shall notify EPA of an intended export before such waste is scheduled to leave the United States. A complete notification should be submitted sixty days before the initial shipment is intended to be shipped off site. This notification may cover export activities extending over a twelve month or lesser period. The notification shall be in writing, signed by the primary exporter, and include the following information:

(1) Name, mailing address, telephone number and EPA ID number of the primary exporter;

(2) By consignee, for each hazardous waste type:

(i) A description of the hazardous waste and the EPA hazardous waste number, from Sections R315-261-20 through 24, and R315-261-30 through 35, U.S. DOT proper shipping name, hazard class and ID number (UN/NA) for each hazardous waste as identified in 49 CFR parts 171 through 177;

(ii) The estimated frequency or rate at which such waste is to be exported and the period of time over which such waste is to be exported.

(iii) The estimated total quantity of the hazardous waste in units as specified in the instructions to the Uniform Hazardous Waste Manifest Form (8700-22);

(iv) All points of entry to and departure from each foreign country through which the hazardous waste will pass;

(v) A description of the means by which each shipment of the hazardous waste will be transported; e.g., mode of transportation vehicle, air, highway, rail, water, etc.; type(s) of container, drums, boxes, tanks, etc.;

(vi) A description of the manner in which the hazardous waste will be treated, stored or disposed of in the receiving country, e.g., land or ocean incineration, other land disposal, ocean dumping, recycling;

(vii) The name and site address of the consignee and any alternate consignee; and

(viii) The name of any transit countries through which the hazardous waste will be sent and a description of the approximate length of time the hazardous waste will remain in such country and the nature of its handling while there;

(b) Notifications submitted by mail should be sent to the following mailing address: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460. Hand-delivered notifications should be sent to: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division, Environmental Protection Agency, Ariel Rios Bldg., Room 6144, 12th St. and Pennsylvania Ave., NW., Washington, DC 20004. In both cases, the following shall be prominently displayed on the front of the envelope: "Attention: Notification of Intent to Export."

(c) Except for changes to the telephone number in Subsection R315-262-53(a)(1), changes to Subsection R315-262-53(a)(2)(v) and decreases in the quantity indicated pursuant to Subsection R315-262-53(a)(2)(iii) when the conditions specified on the original notification change, including any exceedance of the estimate of the quantity of hazardous waste specified in the original notification, the primary exporter shall provide EPA with a written renotification of the change. The shipment cannot take place until consent of the receiving country to the changes, except for changes to Subsection R315-262-53(a)(2)(viii) and in the ports of entry to and departure

from transit countries pursuant to Subsection R315-262-53(a)(2)(iv), has been obtained and the primary exporter receives an EPA Acknowledgment of Consent reflecting the receiving country's consent to the changes.

(d) Upon request by EPA, a primary exporter shall furnish to EPA any additional information which a receiving country requests in order to respond to a notification.

(e) In conjunction with the Department of State, EPA shall provide a complete notification to the receiving country and any transit countries. A notification is complete when EPA receives a notification which EPA determines satisfies the requirements of Subsection R315-262-53(a). Where a claim of confidentiality is asserted with respect to any notification information required by Subsection R315-262-53(a), EPA may find the notification not complete until any such claim is resolved in accordance with Section R315-260-2.

(f) Where the receiving country consents to the receipt of the hazardous waste, EPA shall forward an EPA Acknowledgment of Consent to the primary exporter for purposes of Subsection R315-262-54(h). Where the receiving country objects to receipt of the hazardous waste or withdraws a prior consent, EPA shall notify the primary exporter in writing. EPA shall also notify the primary exporter of any responses from transit countries.

R315-262-54. Special Manifest Requirements.

A primary exporter shall comply with the manifest requirements of Sections R315-262-20 through 23 except that:

(a) In lieu of the name, site address and EPA ID number of the designated permitted facility, the primary exporter shall enter the name and site address of the consignee;

(b) In lieu of the name, site address and EPA ID number of a permitted alternate facility, the primary exporter may enter the name and site address of any alternate consignee.

(c) In the International Shipments block, the primary exporter shall check the export box and enter the point of exit, city and State, from the United States.

(d) The following statement shall be added to the end of the first sentence of the certification set forth in Item 16 of the Uniform Hazardous Waste Manifest Form: "and conforms to the terms of the attached EPA Acknowledgment of Consent";

(e) The primary exporter may obtain the manifest from any source that is registered with the U.S. EPA as a supplier of manifests (e.g., states, waste handlers, and/or commercial forms printers).

(f) The primary exporter shall require the consignee to confirm in writing the delivery of the hazardous waste to that facility and to describe any significant discrepancies, as defined in Subsection R315-264-72(a), between the manifest and the shipment. A copy of the manifest signed by such facility may be used to confirm delivery of the hazardous waste.

(g) In lieu of the requirements of Subsection R315-262-20(d), where a shipment cannot be delivered for any reason to the designated or alternate consignee, the primary exporter shall:

(1) Renotify EPA of a change in the conditions of the original notification to allow shipment to a new consignee in accordance with Subsection R315-262-53(c) and obtain an EPA Acknowledgment of Consent prior to delivery; or

(2) Instruct the transporter to return the waste to the primary exporter in the United States or designate another facility within the United States; and

(3) Instruct the transporter to revise the manifest in accordance with the primary exporter's instructions.

(h) The primary exporter shall attach a copy of the EPA Acknowledgment of Consent to the shipment to the manifest which shall accompany the hazardous waste shipment. For exports by rail or water (bulk shipment), the primary exporter shall provide the transporter with an EPA Acknowledgment of Consent which shall accompany the hazardous waste but which

need not be attached to the manifest except that for exports by water (bulk shipment) the primary exporter shall attach the copy of the EPA Acknowledgment of Consent to the shipping paper.

(i) The primary exporter shall provide the transporter with an additional copy of the manifest for delivery to the U.S. Customs official at the point the hazardous waste leaves the United States in accordance with Subsection R315-263-20(g)(4).

R315-262-55. Exception Reports.

In lieu of the requirements of Section R315-262-42, a primary exporter shall file an exception report with the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, if any of the following occurs:

(a) He has not received a copy of the manifest signed by the transporter stating the date and place of departure from the United States within forty-five days from the date it was accepted by the initial transporter;

(b) Within ninety days from the date the waste was accepted by the initial transporter, the primary exporter has not received written confirmation from the consignee that the hazardous waste was received;

(c) The waste is returned to the United States.

R315-262-56. Annual Reports.

(a) Primary exporters of hazardous waste shall file with the Administrator no later than March 1 of each year, a report summarizing the types, quantities, frequency, and ultimate destination of all hazardous waste exported during the previous calendar year. Such reports shall include the following:

(1) The EPA identification number, name, and mailing and site address of the exporter;

(2) The calendar year covered by the report;

(3) The name and site address of each consignee;

(4) By description, for each hazardous waste exported, a description of the hazardous waste, the EPA hazardous waste number, from Sections R315-261-20 through 24 and R315-261-30 through 35, DOT hazard class, the name and US EPA ID number, where applicable, for each transporter used, the total amount of waste shipped and number of shipments pursuant to each notification;

(5) Except for hazardous waste produced by exporters of greater than 100 kg but less than 1000 kg in a calendar month, unless provided pursuant to Section R315-262-41, in even numbered years:

(i) A description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated; and

(ii) A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for years prior to 1984.

(6) A certification signed by the primary exporter which states: I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

(b) Annual reports submitted by mail should be sent to the following mailing address: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460. Hand-delivered reports should be

sent to: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division, Environmental Protection Agency, Ariel Rios Bldg., Room 6144, 12th St. and Pennsylvania Ave., NW., Washington, DC 20004.

R315-262-57. Recordkeeping.

(a) For all exports a primary exporter shall:

(1) Keep a copy of each notification of intent to export for a period of at least three years from the date the hazardous waste was accepted by the initial transporter;

(2) Keep a copy of each EPA Acknowledgment of Consent for a period of at least three years from the date the hazardous waste was accepted by the initial transporter;

(3) Keep a copy of each confirmation of delivery of the hazardous waste from the consignee for at least three years from the date the hazardous waste was accepted by the initial transporter; and

(4) Keep a copy of each annual report for a period of at least three years from the due date of the report.

(b) The periods of retention referred to in Section R315-262-57 are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator.

R315-262-58. International Agreements.

(a) Any person who exports or imports wastes that are considered hazardous under U.S. national procedures to or from designated Member countries of the Organization for Economic Cooperation and Development (OECD) as defined in Subsection R315-262-58(a)(1) for purposes of recovery is subject to Sections R315-262-80 through 89. The requirements of Sections R315-262-50 through 58 and R315-262-60 do not apply to such exports and imports. A waste is considered hazardous under U.S. national procedures if the waste meets the Federal definition of hazardous waste in Section R315-261-3 and is subject to either the manifesting requirements Sections R315-262-20 through 25 and 27, the universal waste management standards of Rule R315-273, the export requirements in the spent lead-acid battery management standards of Section R315-266-80.

(1) For the purposes of Sections R315-262-80 through 89, the designated OECD Member countries consist of Australia, Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Poland, Portugal, the Republic of Korea, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

(2) For the purposes of Sections R315-262-80 through 89, Canada and Mexico are considered OECD Member countries only for the purpose of transit.

(b) Any person who exports hazardous waste to or imports hazardous waste from: A designated OECD Member country for purposes other than recovery; e.g., incineration, disposal; Mexico, for any purpose; or Canada, for any purpose, remains subject to the requirements of Sections R315-262-50 through 58 and 60, and is not subject to the requirements of Sections R315-262-80 through 89.

R315-262-60. Imports of Hazardous Waste.

(a) Any person who imports hazardous waste from a foreign country into the United States shall comply with the requirements of Rule R315-262.

(b) When importing hazardous waste, a person shall meet all the requirements of Section R315-262-20 for the manifest except that:

(1) In place of the generator's name, address and EPA identification number, the name and address of the foreign

generator and the importer's name, address and EPA identification number shall be used.

(2) In place of the generator's signature on the certification statement, the U.S. importer or his agent shall sign and date the certification and obtain the signature of the initial transporter.

(c) A person who imports hazardous waste may obtain the manifest form from any source that is registered with the U.S. EPA as a supplier of manifests; e.g., states, waste handlers, and/or commercial forms printers.

(d) In the International Shipments block, the importer shall check the import box and enter the point of entry, city and State, into the United States.

(e) The importer shall provide the transporter with an additional copy of the manifest to be submitted by the receiving facility to U.S. EPA in accordance with Subsections R315-264-71(a)(3) and 40 CFR 265.71(a)(3), which is adopted by reference.

R315-262-70. Farmers.

A farmer disposing of waste pesticides from his own use which are hazardous wastes is not required to comply with the standards in Rule R315-262 or other standards in Rules R315-264, R315-265, R315-268, or R315-270 for those wastes provided he triple rinses each emptied pesticide container in accordance with Subsection R315-261-7(b)(3) and disposes of the pesticide residues on his own farm in a manner consistent with the disposal instructions on the pesticide label.

R315-262-80. Applicability.

(a) The requirements of Sections R315-262-80 through 89 apply to imports and exports of wastes that are considered hazardous under U.S. national procedures and are destined for recovery operations in the countries listed in Subsection R315-262-58(a)(1). A waste is considered hazardous under U.S. national procedures if the waste:

(1) Meets the Federal definition of hazardous waste in Section R315-261-3; and

(2) Is subject to either the manifesting requirements Sections R315-262-20 through 25 and 27, the universal waste management standards of Rule R315-273, the export requirements in the spent lead-acid battery management standards of Section R315-266-80.

(b) Any person; exporter, importer, or recovery facility operator; who mixes two or more wastes, including hazardous and non-hazardous wastes, or otherwise subjects two or more wastes, including hazardous and non-hazardous wastes, to physical or chemical transformation operations, and thereby creates a new hazardous waste, becomes a generator and assumes all subsequent generator duties under RCRA and any exporter duties, if applicable, under Sections R315-262-80 through 89.

R315-262-81. Definitions.

The following definitions apply to Sections R315-262-80 through 89.

Competent authority means the regulatory authority or authorities of concerned countries having jurisdiction over transboundary movements of wastes destined for recovery operations.

Countries concerned means the OECD Member countries of export or import and any OECD Member countries of transit.

Country of export means any designated OECD Member country listed in Subsection R315-262-58(a)(1) from which a transboundary movement of hazardous wastes is planned to be initiated or is initiated.

Country of import means any designated OECD Member country listed in Subsection R315-262-58(a)(1) to which a transboundary movement of hazardous wastes is planned or takes place for the purpose of submitting the wastes to recovery

operations therein.

Country of transit means any designated OECD Member country listed in Subsections R315-262-58(a)(1) and (a)(2) other than the country of export or country of import across which a transboundary movement of hazardous wastes is planned or takes place.

Exporter means the person under the jurisdiction of the country of export who has, or will have at the time the planned transboundary movement commences, possession or other forms of legal control of the wastes and who proposes transboundary movement of the hazardous wastes for the ultimate purpose of submitting them to recovery operations. When the United States (U.S.) is the country of export, exporter is interpreted to mean a person domiciled in the United States.

Importer means the person to whom possession or other form of legal control of the waste is assigned at the time the waste is received in the country of import.

OECD area means all land or marine areas under the national jurisdiction of any OECD Member country listed in Section R315-262-58. When the regulations refer to shipments to or from an OECD Member country, this means OECD area.

OECD means the Organization for Economic Cooperation and Development.

Recognized trader means a person who, with appropriate authorization of countries concerned, acts in the role of principal to purchase and subsequently sell wastes; this person has legal control of such wastes from time of purchase to time of sale; such a person may act to arrange and facilitate transboundary movements of wastes destined for recovery operations.

Recovery facility means a facility which, under applicable domestic law, is operating or is authorized to operate in the country of import to receive wastes and to perform recovery operations on them.

Recovery operations means activities leading to resource recovery, recycling, reclamation, direct re-use or alternative uses, which include:

R1 Use as a fuel (other than in direct incineration) or other means to generate energy.

R2 Solvent reclamation/regeneration.

R3 Recycling/reclamation of organic substances which are not used as solvents.

R4 Recycling/reclamation of metals and metal compounds.

R5 Recycling/reclamation of other inorganic materials.

R6 Regeneration of acids or bases.

R7 Recovery of components used for pollution abatement.

R8 Recovery of components used from catalysts.

R9 Used oil re-refining or other reuses of previously used oil.

R10 Land treatment resulting in benefit to agriculture or ecological improvement.

R11 Uses of residual materials obtained from any of the operations numbered R1-R10.

R12 Exchange of wastes for submission to any of the operations numbered R1-R11.

R13 Accumulation of material intended for any operation numbered R1-R12.

Transboundary movement means any movement of wastes from an area under the national jurisdiction of one OECD Member country to an area under the national jurisdiction of another OECD Member country.

R315-262-82. General Conditions.

(a) Scope. The level of control for exports and imports of waste is indicated by assignment of the waste to either a list of wastes subject to the Green control procedures or a list of wastes subject to the Amber control procedures and by the national procedures of the United States, as defined in Subsection R315-262-80(a). The OECD Green and Amber lists are incorporated by reference in Subsection R315-262-89(d).

(1) Listed wastes subject to the Green control procedures.

(i) Green wastes that are not considered hazardous under U.S. national procedures as defined in Subsection R315-262-80(a) are subject to existing controls normally applied to commercial transactions.

(ii) Green wastes that are considered hazardous under U.S. national procedures as defined in Section R315-262-80(a) are subject to the Amber control procedures set forth in Sections R315-262-80 through 89.

(2) Listed wastes subject to the Amber control procedures.

(i) Amber wastes that are considered hazardous under U.S. national procedures as defined in Subsection R315-262-80(a) are subject to the Amber control procedures set forth in Sections R315-262-80 through 89.

(ii) Amber wastes that are considered hazardous under U.S. national procedures as defined in Subsection R315-262-80(a), are subject to the Amber control procedures in the United States, even if they are imported to or exported from a designated OECD Member country listed in Subsection R315-262-58(a)(1) that does not consider the waste to be hazardous. In such an event, the responsibilities of the Amber control procedures shift as provided:

(A) For U.S. exports, the United States shall issue an acknowledgement of receipt and assume other responsibilities of the competent authority of the country of import.

(B) For U.S. imports, the U.S. recovery facility/importer and the United States shall assume the obligations associated with the Amber control procedures that normally apply to the exporter and country of export, respectively.

(iii) Amber wastes that are not considered hazardous under U.S. national procedures as defined in Subsection R315-262-80(a), but are considered hazardous by an OECD Member country are subject to the Amber control procedures in the OECD Member country that considers the waste hazardous. All responsibilities of the U.S. importer/exporter shift to the importer/exporter of the OECD Member country that considers the waste hazardous unless the parties make other arrangements through contracts. Note to Subsection R315-262-82(a)(2): Some wastes subject to the Amber control procedures are not listed or otherwise identified as hazardous under RCRA, and therefore are not subject to the Amber control procedures of Sections R315-262-80 through 89. Regardless of the status of the waste under RCRA, however, other Federal environmental statutes, e.g., the Toxic Substances Control Act, restrict certain waste imports or exports. Such restrictions continue to apply with regard to Sections R315-262-80 through 89.

(3) Procedures for mixtures of wastes.

(i) A Green waste that is mixed with one or more other Green wastes such that the resulting mixture is not considered hazardous under U.S. national procedures as defined in Subsection R315-262-80(a) shall be subject to the Green control procedures, provided the composition of this mixture does not impair its environmentally sound recovery. Note to Subsection R315-262-82(a)(3)(i): The regulated community should note that some OECD Member countries may require, by domestic law, that mixtures of different Green wastes be subject to the Amber control procedures.

(ii) A Green waste that is mixed with one or more Amber wastes, in any amount, de minimis or otherwise, or a mixture of two or more Amber wastes, such that the resulting waste mixture is considered hazardous under U.S. national procedures as defined in Subsection R315-262-80(a) are subject to the Amber control procedures, provided the composition of this mixture does not impair its environmentally sound recovery. Note to Subsection R315-262-82(a)(3)(ii): The regulated community should note that some OECD Member countries may require, by domestic law, that a mixture of a Green waste and more than a de minimis amount of an Amber waste or a mixture of two or more Amber wastes be subject to the Amber

control procedures.

(4) Wastes not yet assigned to an OECD waste list are eligible for transboundary movements, as follows:

(i) If such wastes are considered hazardous under U.S. national procedures as defined in Subsection R315-262-80(a), such wastes are subject to the Amber control procedures.

(ii) If such wastes are not considered hazardous under U.S. national procedures as defined in Subsection R315-262-80(a), such wastes are subject to the Green control procedures.

(b) General conditions applicable to transboundary movements of hazardous waste:

(1) The waste shall be destined for recovery operations at a facility that, under applicable domestic law, is operating or is authorized to operate in the importing country;

(2) The transboundary movement shall be in compliance with applicable international transport agreements; and

Note to Subsection R315-262-82(b)(2): These international agreements include, but are not limited to, the Chicago Convention (1944), ADR (1957), ADN (1970), MARPOL Convention (1973/1978), SOLAS Convention (1974), IMDG Code (1985), COTIF (1985), and RID (1985).

(3) Any transit of waste through a non-OECD Member country shall be conducted in compliance with all applicable international and national laws and regulations.

(c) Provisions relating to re-export for recovery to a third country:

(1) Re-export of wastes subject to the Amber control procedures from the United States, as the country of import, to a third country listed in Subsection R315-262-58(a)(1) may occur only after an exporter in the United States provides notification to and obtains consent from the competent authorities in the third country, the original country of export, and any transit countries. The notification shall comply with the notice and consent procedures in Section R315-262-83 for all countries concerned and the original country of export. The competent authorities of the original country of export, as well as the competent authorities of all other countries concerned have thirty days to object to the proposed movement.

(i) The thirty day period begins once the competent authorities of both the initial country of export and new country of import issue Acknowledgements of Receipt of the notification.

(ii) The transboundary movement may commence if no objection has been lodged after the thirty day period has passed or immediately after written consent is received from all relevant OECD importing and transit countries.

(2) In the case of re-export of Amber wastes to a country other than those listed in Subsection R315-262-58(a)(1), notification to and consent of the competent authorities of the original OECD Member country of export and any OECD Member countries of transit is required as specified in Subsection R315-262-82(c)(1), in addition to compliance with all international agreements and arrangements to which the first importing OECD Member country is a party and all applicable regulatory requirements for exports from the first country of import.

(d) Duty to return or re-export wastes subject to the Amber control procedures. When a transboundary movement of wastes subject to the Amber control procedures cannot be completed in accordance with the terms of the contract or the consent(s) and alternative arrangements cannot be made to recover the waste in an environmentally sound manner in the country of import, the waste shall be returned to the country of export or re-exported to a third country. The provisions of Subsection R315-262-82(c) apply to any shipments to be re-exported to a third country. The following provisions apply to shipments to be returned to the country of export as appropriate:

(1) Return from the United States to the country of export: The U.S. importer shall inform EPA at the specified address in

Subsection R315-262-83(b)(1)(i) of the need to return the shipment. EPA shall then inform the competent authorities of the countries of export and transit, citing the reason(s) for returning the waste. The U.S. importer shall complete the return within ninety days from the time EPA informs the country of export of the need to return the waste, unless informed in writing by EPA of another timeframe agreed to by the concerned Member countries. If the return shipment will cross any transit country, the return shipment may only occur after EPA provides notification to and obtains consent from the competent authority of the country of transit, and provides a copy of that consent to the U.S. importer.

(2) Return from the country of import to the United States: The U.S. exporter shall provide for the return of the hazardous waste shipment within ninety days from the time the country of import informs EPA of the need to return the waste or such other period of time as the concerned Member countries agree. The U.S. exporter shall submit an exception report to EPA in accordance with Subsection R315-262-87(b).

(e) Duty to return wastes subject to the Amber control procedures from a country of transit. When a transboundary movement of wastes subject to the Amber control procedures does not comply with the requirements of the notification and movement documents or otherwise constitutes illegal shipment, and if alternative arrangements cannot be made to recover these wastes in an environmentally sound manner, the waste shall be returned to the country of export. The following provisions apply as appropriate:

(1) Return from the United States, as country of transit, to the country of export: The U.S. transporter shall inform EPA at the specified address in Subsection R315-262-83(b)(1)(i) of the need to return the shipment. EPA shall then inform the competent authority of the country of export, citing the reason(s) for returning the waste. The U.S. transporter shall complete the return within ninety days from the time EPA informs the country of export of the need to return the waste, unless informed in writing by EPA of another timeframe agreed to by the concerned Member countries.

(2) Return from the country of transit to the United States, as country of export: The U.S. exporter shall provide for the return of the hazardous waste shipment within ninety days from the time the competent authority of the country of transit informs EPA of the need to return the waste or such other period of time as the concerned Member countries agree. The U.S. exporter shall submit an exception report to EPA in accordance with Subsection R315-262-87(b).

(f) Requirements for wastes destined for and received by R12 and R13 facilities. The transboundary movement of wastes destined for R12 and R13 operations shall comply with all Amber control procedures for notification and consent as set forth in Section R315-262-83 and for the movement document as set forth in Section R315-262-84. Additional responsibilities of R12/R13 facilities include:

(1) Indicating in the notification document the foreseen recovery facility or facilities where the subsequent R1-R11 recovery operation takes place or may take place.

(2) Within three days of the receipt of the wastes by the R12/R13 recovery facility or facilities, the facility(ies) shall return a signed copy of the movement document to the exporter and to the competent authorities of the countries of export and import. The facility(ies) shall retain the original of the movement document for three years.

(3) As soon as possible, but no later than thirty (30) days after the completion of the R12/R13 recovery operation and no later than one calendar year following the receipt of the waste, the R12 or R13 facility(ies) shall send a certificate of recovery to the foreign exporter and to the competent authority of the country of export and to the Office of Enforcement and Compliance Assurance, Office of Federal Activities,

International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, by mail, e-mail without digital signature followed by mail, or fax followed by mail.

(4) When an R12/R13 recovery facility delivers wastes for recovery to an R1-R11 recovery facility located in the country of import, it shall obtain as soon as possible, but no later than one calendar year following delivery of the waste, a certification from the R1-R11 facility that recovery of the wastes at that facility has been completed. The R12/R13 facility shall promptly transmit the applicable certification to the competent authorities of the countries of import and export, identifying the transboundary movements to which the certification pertain.

(5) When an R12/R13 recovery facility delivers wastes for recovery to an R1-R11 recovery facility located:

(i) In the initial country of export, Amber control procedures apply, including a new notification;

(ii) In a third country other than the initial country of export, Amber control procedures apply, with the additional provision that the competent authority of the initial country of export shall also be notified of the transboundary movement.

(g) Laboratory analysis exemption. The transboundary movement of an Amber waste is exempt from the Amber control procedures if it is in certain quantities and destined for laboratory analysis to assess its physical or chemical characteristics, or to determine its suitability for recovery operations. The quantity of such waste shall be determined by the minimum quantity reasonably needed to perform the analysis in each particular case adequately, but in no case exceed twenty-five kilograms. Waste destined for laboratory analysis shall still be appropriately packaged and labeled.

R315-262-83. Notification and Consent.

(a) Applicability. Consent shall be obtained from the competent authorities of the relevant OECD countries of import and transit prior to exporting hazardous waste destined for recovery operations subject to Sections R315-262-80 through 89. Hazardous wastes subject to the Amber control procedures are subject to the requirements of Subsection R315-262-83(b); and wastes not identified on any list are subject to the requirements of Subsection R315-262-83(c).

(b) Amber wastes. Exports of hazardous wastes from the United States as described in Subsection R315-262-80(a) that are subject to the Amber control procedures are prohibited unless the notification and consent requirements of Subsections R315-262-83(b)(1) or (b)(2) are met.

(1) Transactions requiring specific consent:

(i) Notification. At least forty-five days prior to commencement of each transboundary movement, the exporter shall provide written notification in English of the proposed transboundary movement to the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, with the words "Attention: OECD Export Notification" prominently displayed on the envelope. This notification shall include all of the information identified in Subsection R315-262-83(d). In cases where wastes having similar physical and chemical characteristics, the same United Nations classification, the same RCRA waste codes, and are to be sent periodically to the same recovery facility by the same exporter, the exporter may submit one general notification of intent to export these wastes in multiple shipments during a period of up to one year. Even when a general notification is used for multiple shipments, each shipment still shall be accompanied by its own movement document pursuant to Section R315-262-84.

(ii) Tacit consent. If no objection has been lodged by any countries concerned; i.e., exporting, importing, or transit; to a

notification provided pursuant to Subsection R315-262-83(b)(1)(i) within thirty days after the date of issuance of the Acknowledgement of Receipt of notification by the competent authority of the country of import, the transboundary movement may commence. Tacit consent expires one calendar year after the close of the thirty day period; renotification and renewal of all consents is required for exports after that date.

(iii) Written consent. If the competent authorities of all the relevant OECD importing and transit countries provide written consent in a period less than thirty days, the transboundary movement may commence immediately after all necessary consents are received. Written consent expires for each relevant OECD importing and transit country one calendar year after the date of that country's consent unless otherwise specified; renotification and renewal of each expired consent is required for exports after that date.

(2) Transboundary movements to facilities pre-approved by the competent authorities of the importing countries to accept specific wastes for recovery:

(i) Notification. The exporter shall provide EPA a notification that contains all the information identified in Subsection R315-262-83(d) in English, at least ten days in advance of commencing shipment to a pre-approved facility. The notification shall indicate that the recovery facility is pre-approved, and may apply to a single specific shipment or to multiple shipments as described in Subsection R315-262-83(b)(1)(i). This information shall be sent to the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, with the words "OECD Export Notification-Pre-approved Facility" prominently displayed on the envelope. General notifications that cover multiple shipments as described in Subsection R315-262-83(b)(1)(i) may cover a period of up to three years. Even when a general notification is used for multiple shipments, each shipment still shall be accompanied by its own movement document pursuant to Section R315-262-84.

(ii) Exports to pre-approved facilities may take place after the elapse of seven working days from the issuance of an Acknowledgement of Receipt of the notification by the competent authority of the country of import unless the exporter has received information indicating that the competent authority of any countries concerned objects to the shipment.

(c) Wastes not covered in the OECD Green and Amber lists. Wastes destined for recovery operations, that have not been assigned to the OECD Green and Amber lists, incorporated by reference in Subsection R315-262-89(d), but which are considered hazardous under U.S. national procedures as defined in Subsection R315-262-80(a), are subject to the notification and consent requirements established for the Amber control procedures in accordance with Subsection R315-262-83(b). Wastes destined for recovery operations, that have not been assigned to the OECD Green and Amber lists incorporated by reference in Subsection R315-262-89(d), and are not considered hazardous under U.S. national procedures as defined by Subsection R315-262-80(a) are subject to the Green control procedures.

(d) Notifications submitted under Section R315-262-83 shall include the information specified in Subsections R315-262-83(d)(1) through (d)(14):

(1) Serial number or other accepted identifier of the notification document;

(2) Exporter name and EPA identification number, if applicable, address, telephone, fax numbers, and e-mail address;

(3) Importing recovery facility name, address, telephone, fax numbers, e-mail address, and technologies employed;

(4) Importer name, if not the owner or operator of the recovery facility, address, telephone, fax numbers, and e-mail

address; whether the importer will engage in waste exchange recovery operation R12 or waste accumulation recovery operation R13 prior to delivering the waste to the final recovery facility and identification of recovery operations to be employed at the final recovery facility;

(5) Intended transporter(s) and/or their agent(s); address, telephone, fax, and e-mail address;

(6) Country of export and relevant competent authority, and point of departure;

(7) Countries of transit and relevant competent authorities and points of entry and departure;

(8) Country of import and relevant competent authority, and point of entry;

(9) Statement of whether the notification is a single notification or a general notification. If general, include period of validity requested;

(10) Date(s) foreseen for commencement of transboundary movement(s);

(11) Means of transport envisaged;

(12) Designation of waste type(s) from the appropriate OECD list incorporated by reference in Subsection R315-262-89(d), description(s) of each waste type, estimated total quantity of each, RCRA waste code, and the United Nations number for each waste type;

(13) Specification of the recovery operation(s) as defined in Section R315-262-81.

(14) Certification/Declaration signed by the exporter that states:

I certify that the above information is complete and correct to the best of my knowledge. I also certify that legally-enforceable written contractual obligations have been entered into, and that any applicable insurance or other financial guarantees are or shall be in force covering the transboundary movement.

Name:

Signature:

Date:

Note to Subsection R315-262-83(d)(14): The United States does not currently require financial assurance for these waste shipments. However, U.S. exporters may be asked by other governments to provide and certify to such assurance as a condition of obtaining consent to a proposed movement.

(e) Certificate of Recovery. As soon as possible, but no later than thirty days after the completion of recovery and no later than one calendar year following receipt of the waste, the U.S. recovery facility shall send a certificate of recovery to the exporter and to the competent authorities of the countries of export and import by mail, e-mail without a digital signature followed by mail, or fax followed by mail. The certificate of recovery shall include a signed, written and dated statement that affirms that the waste materials were recovered in the manner agreed to by the parties to the contract required under Section R315-262-85.

R315-262-84. Movement Document.

(a) All U.S. parties subject to the contract provisions of Section R315-262-85 shall ensure that a movement document meeting the conditions of Subsection R315-262-84(b) accompanies each transboundary movement of wastes subject to the Amber control procedures from the initiation of the shipment until it reaches the final recovery facility, including cases in which the waste is stored and/or sorted by the importer prior to shipment to the final recovery facility, except as provided in Subsections R315-262-84(a)(1) and (2).

(1) For shipments of hazardous waste within the United States solely by water, bulk shipments only, the generator shall forward the movement document with the manifest to the last water, bulk shipment, transporter to handle the waste in the United States if exported by water, in accordance with the

manifest routing procedures at Subsection R315-262-23(c).

(2) For rail shipments of hazardous waste within the United States which originate at the site of generation, the generator shall forward the movement document with the manifest, in accordance with the routing procedures for the manifest in Subsection R315-262-23(d), to the next non-rail transporter, if any, or the last rail transporter to handle the waste in the United States if exported by rail.

(b) The movement document shall include all information required under Section R315-262-83, for notification, as well as the following Subsection R315-262-84(b)(1) through (b)(7):

(1) Date movement commenced;

(2) Name; if not exporter, address; telephone; fax numbers; and e-mail of primary exporter;

(3) Company name and EPA ID number of all transporters;

(4) Identification; license, registered name or registration number; of means of transport, including types of packaging envisaged;

(5) Any special precautions to be taken by transporter(s);

(6) Certification/declaration signed by the exporter that no objection to the shipment has been lodged, as follows:

I certify that the above information is complete and correct to the best of my knowledge. I also certify that legally-enforceable written contractual obligations have been entered into, that any applicable insurance or other financial guarantees are or shall be in force covering the transboundary movement, and that:

1. All necessary consents have been received; or

2. The shipment is directed to a recovery facility within the OECD area and no objection has been received from any of the countries concerned within the thirty day tacit consent period; or

3. The shipment is directed to a recovery facility pre-approved for that type of waste within the OECD area; such an authorization has not been revoked, and no objection has been received from any of the countries concerned.

Delete sentences that are not applicable

Name:

Signature:

Date:

(7) Appropriate signatures for each custody transfer, e.g., transporter, importer, and owner or operator of the recovery facility.

(c) Exporters also shall comply with the special manifest requirements of Subsections R315-262-54(a), (b), (c), (e), and (i) and importers shall comply with the import requirements of Section R315-262-60.

(d) Each U.S. person that has physical custody of the waste from the time the movement commences until it arrives at the recovery facility shall sign the movement document; e.g., transporter, importer, and owner or operator of the recovery facility.

(e) Within three working days of the receipt of imports subject to Sections R315-262-80 through 89, the owner or operator of the U.S. recovery facility shall send signed copies of the movement document to the exporter, to the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, and to the competent authorities of the countries of export and transit. If the concerned U.S. recovery facility is a R12/R13 recovery facility as defined under Section R315-262-81, the facility shall retain the original of the movement document for three years.

R315-262-85. Contracts.

(a) Transboundary movements of hazardous wastes subject to the Amber control procedures are prohibited unless they

occur under the terms of a valid written contract, chain of contracts, or equivalent arrangements, when the movement occurs between parties controlled by the same corporate or legal entity. Such contracts or equivalent arrangements shall be executed by the exporter and the owner or operator of the recovery facility, and shall specify responsibilities for each. Contracts or equivalent arrangements are valid for the purposes of Section R315-262-85 only if persons assuming obligations under the contracts or equivalent arrangements have appropriate legal status to conduct the operations specified in the contract or equivalent arrangements.

(b) Contracts or equivalent arrangements shall specify the name and EPA ID number, where available, of Subsections R315-262-85(b)(1) through (b)(4):

- (1) The generator of each type of waste;
- (2) Each person who will have physical custody of the wastes;
- (3) Each person who will have legal control of the wastes; and
- (4) The recovery facility.

(c) Contracts or equivalent arrangements shall specify which party to the contract will assume responsibility for alternate management of the wastes if their disposition cannot be carried out as described in the notification of intent to export. In such cases, contracts shall specify that:

(1) The person having actual possession or physical control over the wastes will immediately inform the exporter and the competent authorities of the countries of export and import and, if the wastes are located in a country of transit, the competent authorities of that country; and

(2) The person specified in the contract will assume responsibility for the adequate management of the wastes in compliance with applicable laws and regulations including, if necessary, arranging the return of wastes and, as the case may be, shall provide the notification for re-export.

(d) Contracts shall specify that the importer will provide the notification required in Subsection R315-262-82(c) prior to the re-export of controlled wastes to a third country.

(e) Contracts or equivalent arrangements shall include provisions for financial guarantees, if required by the competent authorities of any countries concerned, in accordance with applicable national or international law requirements.

Note to Subsection R315-262-85(e): Financial guarantees so required are intended to provide for alternate recycling, disposal or other means of sound management of the wastes in cases where arrangements for the shipment and the recovery operations cannot be carried out as foreseen. The United States does not require such financial guarantees at this time; however, some OECD Member countries do. It is the responsibility of the exporter to ascertain and comply with such requirements; in some cases, transporters or importers may refuse to enter into the necessary contracts absent specific references or certifications to financial guarantees.

(f) Contracts or equivalent arrangements shall contain provisions requiring each contracting party to comply with all applicable requirements of Sections R315-262-80 through 89.

(g) Upon request by EPA, U.S. exporters, importers, or recovery facilities shall submit to EPA copies of contracts, chain of contracts, or equivalent arrangements, when the movement occurs between parties controlled by the same corporate or legal entity. Information contained in the contracts or equivalent arrangements for which a claim of confidentiality is asserted in accordance with 40 CFR 2.203(b) shall be treated as confidential and shall be disclosed by EPA only as provided in 40 CFR 260.2.

Note to Subsection R315-262-85(g): Although the United States does not require routine submission of contracts at this time, the OECD Decision allows Member countries to impose such requirements. When other OECD Member countries

require submission of partial or complete copies of the contract as a condition to granting consent to proposed movements, EPA shall request the required information; absent submission of such information, some OECD Member countries may deny consent for the proposed movement.

R315-262-86. Provisions Relating to Recognized Traders.

(a) A recognized trader who takes physical custody of a waste and conducts recovery operations, including storage prior to recovery, is acting as the owner or operator of a recovery facility and shall be so authorized in accordance with all applicable Federal laws.

(b) A recognized trader acting as an exporter or importer for transboundary shipments of waste shall comply with all the requirements of Sections R315-262-80 through 89 associated with being an exporter or importer.

R315-262-87. Reporting and Recordkeeping.

(a) Annual reports. For all waste movements subject to Sections R315-262-80 through 89, persons, e.g., exporters, recognized traders, who meet the definition of primary exporter in Section R315-262-51 or who initiate the movement documentation under Section R315-262-84 shall file an annual report with the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, no later than March 1 of each year summarizing the types, quantities, frequency, and ultimate destination of all such hazardous waste exported during the previous calendar year. If the primary exporter or the person who initiates the movement document under Section R315-262-84 is required to file an annual report for waste exports that are not covered under Sections R315-262-80 through 89, he may include all export information in one report provided the following information on exports of waste destined for recovery within the designated OECD Member countries is contained in a separate section. Such reports shall include all of the following Sections R315-262-87(a)(1) through (a)(6) specified as follows:

(1) The EPA identification number, name, and mailing and site address of the exporter filing the report;

(2) The calendar year covered by the report;

(3) The name and site address of each final recovery facility;

(4) By final recovery facility, for each hazardous waste exported, a description of the hazardous waste, the EPA hazardous waste number, from Sections R315-261-20 through 24 or R315-262-30 through 35, designation of waste type(s) and applicable waste code(s) from the appropriate OECD waste list incorporated by reference in Subsection R315-262-89(d), DOT hazard class, the name and U.S. EPA identification number, where applicable, for each transporter used, the total amount of hazardous waste shipped pursuant to Sections R315-262-80 through 89, and number of shipments pursuant to each notification;

(5) In even numbered years, for each hazardous waste exported, except for hazardous waste produced by exporters of greater than 100kg but less than 1,000kg in a calendar month, and except for hazardous waste for which information was already provided pursuant to Section R315-262-41:

(i) A description of the efforts undertaken during the year to reduce the volume and toxicity of the waste generated; and

(ii) A description of the changes in volume and toxicity of the waste actually achieved during the year in comparison to previous years to the extent such information is available for years prior to 1984; and

(6) A certification signed by the person acting as primary exporter or initiator of the movement document under Section

R315-262-84 that states:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

(b) Exception reports. Any person who meets the definition of primary exporter in Section R315-262-51 or who initiates the movement document under Section R315-262-84 shall file an exception report in lieu of the requirements of Section R315-262-42, if applicable, with the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, if any of the following occurs:

(1) He has not received a copy of the RCRA hazardous waste manifest, if applicable, signed by the transporter identifying the point of departure of the waste from the United States, within forty-five days from the date it was accepted by the initial transporter;

(2) Within ninety days from the date the waste was accepted by the initial transporter, the exporter has not received written confirmation from the recovery facility that the hazardous waste was received;

(3) The waste is returned to the United States.

(c) Recordkeeping.

(1) Persons who meet the definition of primary exporter in Section R315-262-51 or who initiate the movement document under Section R315-262-84 shall keep the following records in Subsections R315-262-87(c)(1)(i) through (c)(1)(iv):

(i) A copy of each notification of intent to export and all written consents obtained from the competent authorities of countries concerned for a period of at least three years from the date the hazardous waste was accepted by the initial transporter;

(ii) A copy of each annual report for a period of at least three years from the due date of the report;

(iii) A copy of any exception reports and a copy of each confirmation of delivery, i.e., movement document, sent by the recovery facility to the exporter for at least three years from the date the hazardous waste was accepted by the initial transporter or received by the recovery facility, whichever is applicable; and

(iv) A copy of each certificate of recovery sent by the recovery facility to the exporter for at least three years from the date that the recovery facility completed processing the waste shipment.

(2) The periods of retention referred to in Section R315-262-87 are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator.

R315-262-89. OECD Waste Lists.

(a) General. For the purposes of Sections R315-262-80 through 89, a waste is considered hazardous under U.S. national procedures, and hence subject to Sections R315-262-80 through 89, if the waste:

(1) Meets the Federal definition of hazardous waste in Section R315-261-3; and

(2) Is subject to either Sections R315-262-20 through 25 and 27, the universal waste management standards of Rule R315-273, the export requirements in the spent lead-acid battery management standards of Section R315-266-80.

(b) If a waste is hazardous under Subsection R315-262-89(a), it is subject to the Amber control procedures, regardless of whether it appears in Appendix 4 of the OECD Decision, as defined in Section R315-262-81.

(c) The appropriate control procedures for hazardous wastes and hazardous waste mixtures are addressed in Section R315-262-82.

(d) The OECD waste lists, as set forth in Annex B ("Green List") and Annex C ("Amber List") (collectively "OECD waste lists") of the 2009 "Guidance Manual for the Implementation of Council Decision C(2001)107/FINAL, as Amended, on the Control of Transboundary Movements of Wastes Destined for Recovery Operations," are incorporated by reference. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. This material is incorporated as it exists on the date of the approval and a notice of any change in these materials shall be published in the Federal Register. The materials are available for inspection at: the U.S. Environmental Protection Agency, Docket Center Public Reading Room, EPA West, Room 3334, 1301 Constitution Avenue NW., Washington, DC 20004 (Docket # EPA-HQ-RCRA-2005-0018) or at the National Archives and Records Administration (NARA), and may be obtained from the Organization for Economic Cooperation and Development, Environment Directorate, 2 rue André Pascal, F-75775 Paris Cedex 16, France. For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>. To contact the EPA Docket Center Public Reading Room, call (202) 566-1744. To contact the OECD, call +33 (0) 1 45 24 81 67.

R315-262-200. Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities -- Definitions for Sections R315-262-200 through R315-262-216.

(a) The following definitions apply to Sections R315-262-200 through 216:

(1) "Central accumulation area" means an on-site hazardous waste accumulation area subject to either Subsections R315-262-34(a) through (b), large quantity generators, or Subsections R315-262-34(d) through (f), small quantity generators. A central accumulation area at an eligible academic entity that chooses to be subject to Section R315-262-200 through 216 shall also comply with Section R315-262-211 when accumulating unwanted material and/or hazardous waste.

(2) "College/University" means a private or public, post-secondary, degree-granting, academic institution, that is accredited by an accrediting agency listed annually by the U.S. Department of Education.

(3) "Eligible academic entity" means a college or university, or a non-profit research institute that is owned by or has a formal written affiliation agreement with a college or university, or a teaching hospital that is owned by or has a formal written affiliation agreement with a college or university.

(4) "Formal written affiliation agreement for a non-profit research institute" means a written document that establishes a relationship between institutions for the purposes of research and/or education and is signed by authorized representatives, as defined by Section R315-260-10, from each institution. A relationship on a project-by-project or grant-by-grant basis is not considered a formal written affiliation agreement. A formal written affiliation agreement for a teaching hospital means a master affiliation agreement and program letter of agreement, as defined by the Accreditation Council for Graduate Medical Education, with an accredited medical program or medical school.

(5) Laboratory means an area owned by an eligible academic entity where relatively small quantities of chemicals and other substances are used on a non-production basis for teaching or research, or diagnostic purposes at a teaching hospital, and are stored and used in containers that are easily

manipulated by one person. Photo laboratories, art studios, and field laboratories are considered laboratories. Areas such as chemical stockrooms and preparatory laboratories that provide a support function to teaching or research laboratories, or diagnostic laboratories at teaching hospitals, are also considered laboratories.

(6) "Laboratory clean-out" means an evaluation of the inventory of chemicals and other materials in a laboratory that are no longer needed or that have expired and the subsequent removal of those chemicals or other unwanted materials from the laboratory. A clean-out may occur for several reasons. It may be on a routine basis, e.g., at the end of a semester or academic year, or as a result of a renovation, relocation, or change in laboratory supervisor/occupant. A regularly scheduled removal of unwanted material as required by Section R315-262-208 does not qualify as a laboratory clean-out.

(7) "Laboratory worker" means a person who handles chemicals and/or unwanted material in a laboratory and may include, but is not limited to, faculty, staff, post-doctoral fellows, interns, researchers, technicians, supervisors/managers, and principal investigators. A person does not need to be paid or otherwise compensated for his/her work in the laboratory to be considered a laboratory worker. Undergraduate and graduate students in a supervised classroom setting are not laboratory workers.

(8) "Non-profit research institute" means an organization that conducts research as its primary function and files as a non-profit organization under the tax code of 26 U.S.C. 501(c)(3).

(9) "Reactive acutely hazardous unwanted material" means an unwanted material that is one of the acutely hazardous commercial chemical products listed in Subsection R315-261-33(e) for reactivity.

(10) "Teaching hospital" means a hospital that trains students to become physicians, nurses or other health or laboratory personnel.

(11) "Trained professional" means a person who has completed the applicable RCRA training requirements of Section R315-265-16 for large quantity generators, or is knowledgeable about normal operations and emergencies in accordance with Subsection R315-262-34(d)(5)(iii) for small quantity generators and conditionally exempt small quantity generators. A trained professional may be an employee of the eligible academic entity or may be a contractor or vendor who meets the requisite training requirements.

(12) "Unwanted material" means any chemical, mixtures of chemicals, products of experiments or other material from a laboratory that is no longer needed, wanted or usable in the laboratory and that is destined for hazardous waste determination by a trained professional. Unwanted materials include reactive acutely hazardous unwanted materials and materials that may eventually be determined not to be solid waste pursuant to Section R315-261-2, or a hazardous waste pursuant to Section R315-261-3. If an eligible academic entity elects to use another equally effective term in lieu of "unwanted material," as allowed by Subsection R315-262-206(a)(1)(i), the equally effective term has the same meaning and is subject to the same requirements as "unwanted material" under Section R315-262-200 through 216.

(13) "Working container" means a small container, i.e., two gallons or less, that is in use at a laboratory bench, hood, or other work station, to collect unwanted material from a laboratory experiment or procedure.

R315-262-201. Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities -- Applicability of Sections R315-262-200 through R315-262-216.

(a) Large quantity generators and small quantity

generators. Sections R315-262-200 through 216 provides alternative requirements to the requirements in Section R315-262-11 and Subsection R315-262-34(c) for the hazardous waste determination and accumulation of hazardous waste in laboratories owned by eligible academic entities that choose to be subject to Sections R315-262-200 through 216, provided that they complete the notification requirements of Section R315-262-203.

(b) Conditionally exempt small quantity generators. Sections R315-262-200 through 216 provides alternative requirements to the conditional exemption in Subsection R315-261-5(b) for the accumulation of hazardous waste in laboratories owned by eligible academic entities that choose to be subject to Sections R315-262-200 through 216, provided that they complete the notification requirements of Section R315-262-203.

R315-262-202. Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities -- Sections R315-262-200 through R315-262-216 are Optional.

(a) Large quantity generators and small quantity generators. Eligible academic entities have the option of complying with Sections R315-262-200 through 216 with respect to its laboratories, as an alternative to complying with the requirements of Section R315-262-11 and Subsection R315-262-34(c).

(b) Conditionally exempt small quantity generators. Eligible academic entities have the option of complying with Sections R315-262-200 through 216 with respect to its laboratories, as an alternative to complying with the conditional exemption of Subsection R315-261-5(b).

R315-262-203. Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities -- How an Eligible Academic Entity Indicates it will be Subject to the Requirements of Sections R315-262-200 through R315-262-216.

(a) An eligible academic entity shall notify the Director in writing, using the RCRA Subtitle C Site Identification Form, EPA Form 8700-12, that it is electing to be subject to the requirements of Sections R315-262-200 through 216 for all the laboratories owned by the eligible academic entity under the same EPA Identification Number. An eligible academic entity that is a conditionally exempt small quantity generator and does not have an EPA Identification Number shall notify that it is electing to be subject to the requirements of Sections R315-262-200 through 216 for all the laboratories owned by the eligible academic entity that are on-site, as defined by Section R315-260-10. An eligible academic entity shall submit a separate notification, Site Identification Form, for each EPA Identification Number, or site, for conditionally exempt small quantity generators, that is electing to be subject to the requirements of Sections R315-262-200 through 216, and shall submit the Site Identification Form before it begins operating under Sections R315-262-200 through 216.

(b) When submitting the Site Identification Form, the eligible academic entity shall, at a minimum, fill out the following fields on the form:

- (1) Reason for Submittal.
- (2) Site EPA Identification Number, except for conditionally exempt small quantity generators.
- (3) Site Name.
- (4) Site Location Information.
- (5) Site Land Type.
- (6) North American Industry Classification System (NAICS) Code(s) for the Site.

- (7) Site Mailing Address.
- (8) Site Contact Person.
- (9) Operator and Legal Owner of the Site.
- (10) Type of Regulated Waste Activity.
- (11) Certification.

(c) An eligible academic entity shall keep a copy of the notification on file at the eligible academic entity for as long as its laboratories are subject to Sections R315-262-200 through 216.

(d) A teaching hospital that is not owned by a college or university shall keep a copy of its formal written affiliation agreement with a college or university on file at the teaching hospital for as long as its laboratories are subject to Sections R315-262-200 through 216.

(e) A non-profit research institute that is not owned by a college or university shall keep a copy of its formal written affiliation agreement with a college or university on file at the non-profit research institute for as long as its laboratories are subject to Sections R315-262-200 through 216.

R315-262-204. Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities - How an Eligible Academic Entity Indicates It Will Withdraw from the Requirements of Sections R315-262-200 Through 216.

(a) An eligible academic entity shall notify the Director in writing, using the RCRA Subtitle C Site Identification Form (EPA Form 8700-12), that it is electing to no longer be subject to the requirements of Sections R315-262-200 through 216 for all the laboratories owned by the eligible academic entity under the same EPA Identification Number and that it will comply with the requirements of Section R315-262-11 and Subsection R315-262-34(c) for small quantity generators and large quantity generators. An eligible academic entity that is a conditionally exempt small quantity generator and does not have an EPA Identification Number shall notify that it is withdrawing from the requirements of Sections R315-262-200 through 216 for all the laboratories owned by the eligible academic entity that are on-site and that it will comply with the conditional exemption in Subsection R315-261-5(b). An eligible academic entity shall submit a separate notification, Site Identification Form, for each EPA Identification Number, or site, for conditionally exempt small quantity generators, that is withdrawing from the requirements of Sections R315-262-200 through 216 and shall submit the Site Identification Form before it begins operating under the requirements of Section R315-262-11 and Subsection R315-262-34(c) for small quantity generators and large quantity generators, or Subsection R315-261-5(b) for conditionally exempt small quantity generators.

(b) When submitting the Site Identification Form, the eligible academic entity shall, at a minimum, fill out the following fields on the form:

- (1) Reason for Submittal.
- (2) Site EPA Identification Number, except for conditionally exempt small quantity generators.
- (3) Site Name.
- (4) Site Location Information.
- (5) Site Land Type.
- (6) North American Industry Classification System (NAICS) Code(s) for the Site.
- (7) Site Mailing Address.
- (8) Site Contact Person.
- (9) Operator and Legal Owner of the Site.
- (10) Type of Regulated Waste Activity.
- (11) Certification.

(c) An eligible academic entity shall keep a copy of the withdrawal notice on file at the eligible academic entity for three years from the date of the notification.

R315-262-205. Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities Summary of the Requirements of Sections R315-262-200 through R315-262-216.

An eligible academic entity that chooses to be subject to Sections R315-262-200 through 216 is not required to have interim status or a RCRA Part B permit for the accumulation of unwanted material and hazardous waste in its laboratories, provided the laboratories comply with the provisions of Sections R315-262-200 through 216 and the eligible academic entity has a Laboratory Management Plan (LMP) in accordance with Section R315-262-214 that describes how the laboratories owned by the eligible academic entity will comply with the requirements of Sections R315-262-200 through 216.

R315-262-206. Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities -- Labeling and Management Standards for Containers of Unwanted Material in the Laboratory.

An eligible academic entity shall manage containers of unwanted material while in the laboratory in accordance with the requirements in Section R315-262-206.

(a) Labeling: Label unwanted material as follows:
(1) The following information shall be affixed or attached to the container:

(i) The words "unwanted material" or another equally effective term that is to be used consistently by the eligible academic entity and that is identified in Part I of the Laboratory Management Plan, and

(ii) Sufficient information to alert emergency responders to the contents of the container. Examples of information that would be sufficient to alert emergency responders to the contents of the container include, but are not limited to:

- (A) The name of the chemical(s),
- (B) The type or class of chemical, such as organic solvents or halogenated organic solvents.

(2) The following information may be affixed or attached to the container, but shall at a minimum be associated with the container:

(i) The date that the unwanted material first began accumulating in the container, and

(ii) Information sufficient to allow a trained professional to properly identify whether an unwanted material is a solid and hazardous waste and to assign the proper hazardous waste code(s), pursuant to Section R315-262-11. Examples of information that would allow a trained professional to properly identify whether an unwanted material is a solid or hazardous waste include, but are not limited to:

- (A) The name and/or description of the chemical contents or composition of the unwanted material, or, if known, the product of the chemical reaction,
- (B) Whether the unwanted material has been used or is unused,
- (C) A description of the manner in which the chemical was produced or processed, if applicable.

(b) Management of Containers in the Laboratory. An eligible academic entity shall properly manage containers of unwanted material in the laboratory to assure safe storage of the unwanted material, to prevent leaks, spills, emissions to the air, adverse chemical reactions, and dangerous situations that may result in harm to human health or the environment. Proper container management shall include the following:

(1) Containers are maintained and kept in good condition and damaged containers are replaced, overpacked, or repaired, and

(2) Containers are compatible with their contents to avoid reactions between the contents and the container; and are made

of, or lined with, material that is compatible with the unwanted material so that the container's integrity is not impaired, and

(3) Containers shall be kept closed at all times, except:

(i) When adding, removing or bulking unwanted material, or

(ii) A working container may be open until the end of the procedure or work shift, or until it is full, whichever comes first, at which time the working container shall either be closed or the contents emptied into a separate container that is then closed, or

(iii) When venting of a container is necessary.

(A) For the proper operation of laboratory equipment, such as with in-line collection of unwanted materials from high performance liquid chromatographs, or

(B) To prevent dangerous situations, such as build-up of extreme pressure.

R315-262-207. Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities -- Training.

An eligible academic entity shall provide training to all individuals working in a laboratory at the eligible academic entity, as follows:

(a) Training for laboratory workers and students shall be commensurate with their duties so they understand the requirements in Sections R315-262-200 through 216 and can implement them.

(b) An eligible academic entity can provide training for laboratory workers and students in a variety of ways, including, but not limited to:

(1) Instruction by the professor or laboratory manager before or during an experiment; or

(2) Formal classroom training; or

(3) Electronic/written training; or

(4) On-the-job training; or

(5) Written or oral exams.

(c) An eligible academic entity that is a large quantity generator shall maintain documentation for the durations specified in 40 CFR 265.16(e), which is incorporated by reference in R315-265, demonstrating training for all laboratory workers that is sufficient to determine whether laboratory workers have been trained. Examples of documentation demonstrating training can include, but are not limited to, the following:

(1) Sign-in/attendance sheet(s) for training session(s); or

(2) Syllabus for training session; or

(3) Certificate of training completion; or

(4) Test results.

(d) A trained professional shall:

(1) Accompany the transfer of unwanted material and hazardous waste when the unwanted material and hazardous waste is removed from the laboratory, and

(2) Make the hazardous waste determination, pursuant to Section R315-262-11, for unwanted material.

R315-262-208. Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities -- Removing Containers of Unwanted Material from the Laboratory.

(a) Removing containers of unwanted material on a regular schedule. An eligible academic entity shall either:

(1) Remove all containers of unwanted material from each laboratory on a regular interval, not to exceed 6 months; or

(2) Remove containers of unwanted material from each laboratory within 6 months of each container's accumulation start date.

(b) The eligible academic entity shall specify in Part I of its Laboratory Management Plan whether it will comply with

Subsection R315-262-208(a)(1) or (a)(2) for the regular removal of unwanted material from its laboratories.

(c) The eligible academic entity shall specify in Part II of its Laboratory Management Plan how it will comply with Subsection R315-262-208(a)(1) or (a)(2) and develop a schedule for regular removals of unwanted material from its laboratories.

(d) Removing containers of unwanted material when volumes are exceeded.

(1) If a laboratory accumulates a total volume of unwanted material, including reactive acutely hazardous unwanted material, in excess of 55 gallons before the regularly scheduled removal, the eligible academic entity shall ensure that all containers of unwanted material in the laboratory, including reactive acutely hazardous unwanted material:

(i) Are marked on the label that is associated with the container, or on the label that is affixed or attached to the container, if that is preferred, with the date that 55 gallons is exceeded; and

(ii) Are removed from the laboratory within 10 calendar days of the date that 55 gallons was exceeded, or at the next regularly scheduled removal, whichever comes first.

(2) If a laboratory accumulates more than 1 quart of reactive acutely hazardous unwanted material before the regularly scheduled removal, then the eligible academic entity shall ensure that all containers of reactive acutely hazardous unwanted material:

(i) Are marked on the label that is associated with the container, or on the label that is affixed or attached to the container, if that is preferred, with the date that 1 quart is exceeded; and

(ii) Are removed from the laboratory within 10 calendar days of the date that 1 quart was exceeded, or at the next regularly scheduled removal, whichever comes first.

R315-262-209. Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities -- Where and When to Make the Hazardous Waste Determination and Where to Send Containers of Unwanted Material Upon Removal from the Laboratory.

(a) Large quantity generators and small quantity generators--an eligible academic entity shall ensure that a trained professional makes a hazardous waste determination, pursuant to Section R315-262-11, for unwanted material in any of the following areas:

(1) In the laboratory before the unwanted material is removed from the laboratory, in accordance with Section R315-262-210;

(2) Within 4 calendar days of arriving at an on-site central accumulation area, in accordance with Section R315-262-211; and

(3) Within 4 calendar days of arriving at an on-site interim status or permitted treatment, storage or disposal facility, in accordance with Section R315-262-212.

(b) Conditionally exempt small quantity generators--an eligible academic entity shall ensure that a trained professional makes a hazardous waste determination, pursuant to Section R315-262-11, for unwanted material in the laboratory before the unwanted material is removed from the laboratory, in accordance with Section R315-262-210.

R315-262-210. Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities -- Making the Hazardous Waste Determination in the Laboratory Before the Unwanted Material is Removed from the Laboratory.

If an eligible academic entity makes the hazardous waste

determination, pursuant to Section R315-262-11, for unwanted material in the laboratory, it shall comply with the following:

(a) A trained professional shall make the hazardous waste determination, pursuant to Section R315-262-11, before the unwanted material is removed from the laboratory.

(b) If an unwanted material is a hazardous waste, the eligible academic entity shall:

(1) Write the words "hazardous waste" on the container label that is affixed or attached to the container, before the hazardous waste may be removed from the laboratory; and

(2) Write the appropriate hazardous waste code(s) on the label that is associated with the container, or on the label that is affixed or attached to the container, if that is preferred, before the hazardous waste is transported off-site.

(3) Count the hazardous waste toward the eligible academic entity's generator status, pursuant to Subsections R315-261-5(c) and (d), in the calendar month that the hazardous waste determination was made.

(c) A trained professional shall accompany all hazardous waste that is transferred from the laboratory(ies) to an on-site central accumulation area or on-site interim status or permitted treatment, storage or disposal facility.

(d) When hazardous waste is removed from the laboratory:

(1) Large quantity generators and small quantity generators shall ensure it is taken directly from the laboratory(ies) to an on-site central accumulation area, or on-site interim status or permitted treatment, storage or disposal facility, or transported off-site.

(2) Conditionally exempt small quantity generators shall ensure it is taken directly from the laboratory(ies) to any of the types of facilities listed in Subsection R315-261-5(f)(3) for acute hazardous waste, or Subsection R315-261-5(g)(3) for hazardous waste.

(e) An unwanted material that is a hazardous waste is subject to all applicable hazardous waste regulations when it is removed from the laboratory.

R315-262-211. Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities - Making the Hazardous Waste Determination at an On-Site Central Accumulation Area.

If an eligible academic entity makes the hazardous waste determination, pursuant to Section R315-262-11, for unwanted material at an on-site central accumulation area, it shall comply with the following:

(a) A trained professional shall accompany all unwanted material that is transferred from the laboratory(ies) to an on-site central accumulation area.

(b) All unwanted material removed from the laboratory(ies) shall be taken directly from the laboratory(ies) to the on-site central accumulation area.

(c) The unwanted material becomes subject to the generator accumulation regulations of Subsection R315-262-34(a) for large quantity generators or Subsections R315-262-34(d) through (f) for small quantity generators as soon as it arrives in the central accumulation area, except for the "hazardous waste" labeling requirements of Subsection R315-262-34(a)(3).

(d) A trained professional shall determine, pursuant to Section R315-262-11, if the unwanted material is a hazardous waste within 4 calendar days of the unwanted materials' arrival at the on-site central accumulation area.

(e) If the unwanted material is a hazardous waste, the eligible academic entity shall:

(1) Write the words "hazardous waste" on the container label that is affixed or attached to the container, within 4 calendar days of arriving at the on-site central accumulation area and before the hazardous waste may be removed from the on-

site central accumulation area, and

(2) Write the appropriate hazardous waste code(s) on the container label that is associated with the container, or on the label that is affixed or attached to the container, if that is preferred, before the hazardous waste may be treated or disposed of on-site or transported off-site, and

(3) Count the hazardous waste toward the eligible academic entity's generator status, pursuant to Subsection R315-261-5(c) and (d) in the calendar month that the hazardous waste determination was made, and

(4) Manage the hazardous waste according to all applicable hazardous waste regulations.

R315-262-212. Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities -- Making the Hazardous Waste Determination at an On-Site Interim Status or Permitted Treatment, Storage or Disposal Facility.

If an eligible academic entity makes the hazardous waste determination, pursuant to Section R315-262-11, for unwanted material at an on-site interim status or permitted treatment, storage or disposal facility, it shall comply with the following:

(a) A trained professional shall accompany all unwanted material that is transferred from the laboratory(ies) to an on-site interim status or permitted treatment, storage or disposal facility.

(b) All unwanted material removed from the laboratory(ies) shall be taken directly from the laboratory(ies) to the on-site interim status or permitted treatment, storage or disposal facility.

(c) The unwanted material becomes subject to the terms of the eligible academic entity's hazardous waste permit or interim status as soon as it arrives in the on-site treatment, storage or disposal facility.

(d) A trained professional shall determine, pursuant to Section R315-262-11, if the unwanted material is a hazardous waste within 4 calendar days of the unwanted materials' arrival at an on-site interim status or permitted treatment, storage or disposal facility.

(e) If the unwanted material is a hazardous waste, the eligible academic entity shall:

(1) Write the words "hazardous waste" on the container label that is affixed or attached to the container within 4 calendar days of arriving at the on-site interim status or permitted treatment, storage or disposal facility and before the hazardous waste may be removed from the on-site interim status or permitted treatment, storage or disposal facility, and

(2) Write the appropriate hazardous waste code(s) on the container label that is associated with the container, or on the label that is affixed or attached to the container, if that is preferred, before the hazardous waste may be treated or disposed on-site or transported off-site, and

(3) Count the hazardous waste toward the eligible academic entity's generator status, pursuant to Subsections R315-261-5(c) and (d) in the calendar month that the hazardous waste determination was made, and

(4) Manage the hazardous waste according to all applicable hazardous waste regulations.

R315-262-213. Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities -- Laboratory Clean-outs.

(a) One time per 12 month period for each laboratory, an eligible academic entity may opt to conduct a laboratory clean-out that is subject to all the applicable requirements of Sections R315-262-200 through 216, except that:

(1) If the volume of unwanted material in the laboratory exceeds 55 gallons, or 1 quart of reactive acutely hazardous

unwanted material, the eligible academic entity is not required to remove all unwanted materials from the laboratory within 10 calendar days of exceeding 55 gallons, or 1 quart of reactive acutely hazardous unwanted material, as required by Section R315-262-208. Instead, the eligible academic entity shall remove all unwanted materials from the laboratory within 30 calendar days from the start of the laboratory clean-out; and

(2) For the purposes of on-site accumulation, an eligible academic entity is not required to count a hazardous waste that is an unused commercial chemical product, listed in Sections R315-261-30 through 35 or exhibiting one or more characteristics in Sections R315-261-20 through 24, generated solely during the laboratory clean-out toward its hazardous waste generator status, pursuant to Subsections R315-261-5(c) and (d). An unwanted material that is generated prior to the beginning of the laboratory clean-out and is still in the laboratory at the time the laboratory clean-out commences shall be counted toward hazardous waste generator status, pursuant to Subsections R315-261-5(c) and (d), if it is determined to be hazardous waste; and

(3) For the purposes of off-site management, an eligible academic entity shall count all its hazardous waste, regardless of whether the hazardous waste was counted toward generator status under Subsection R315-262-213(a)(2), and if it generates more than 1 kg/month of acute hazardous waste or more than 100 kg/month of hazardous waste, i.e., the conditionally exempt small quantity generator limits of Section R315-261-5, the hazardous waste is subject to all applicable hazardous waste regulations when it is transported off-site; and

(4) An eligible academic entity shall document the activities of the laboratory clean-out. The documentation shall, at a minimum, identify the laboratory being cleaned out, the date the laboratory clean-out begins and ends, and the volume of hazardous waste generated during the laboratory clean-out. The eligible academic entity shall maintain the records for a period of three years from the date the clean-out ends; and

(b) For all other laboratory clean-outs conducted during the same 12-month period, an eligible academic entity is subject to all the applicable requirements of Sections R315-262-200 through 216, including, but not limited to:

(1) The requirement to remove all unwanted materials from the laboratory within 10 calendar days of exceeding 55 gallons, or 1 quart of reactive acutely hazardous unwanted material, as required by Section R315-262-208; and

(2) The requirement to count all hazardous waste, including unused hazardous waste, generated during the laboratory clean-out toward its hazardous waste generator status, pursuant to Subsections R315-261-5(c) and (d).

R315-262-214. Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities Laboratory Management Plan.

An eligible academic entity shall develop and retain a written Laboratory Management Plan, or revise an existing written plan. The Laboratory Management Plan is a site-specific document that describes how the eligible academic entity will manage unwanted materials in compliance with Sections R315-262-200 through 216. An eligible academic entity may write one Laboratory Management Plan for all the laboratories owned by the eligible academic entity that have opted into Sections R315-262-200 through 216, even if the laboratories are located at sites with different EPA Identification Numbers. The Laboratory Management Plan shall contain two parts with a total of nine elements identified in Subsections R315-262-214(a) and (b). In Part I of its Laboratory Management Plan, an eligible academic entity shall describe its procedures for each of the elements listed in Subsection R315-262-214(a). An eligible academic entity shall implement and comply with the specific

provisions that it develops to address the elements in Part I of the Laboratory Management Plan. In Part II of its Laboratory Management Plan, an eligible academic entity shall describe its best management practices for each of the elements listed in Subsection R315-262-214(b). The specific actions taken by an eligible academic entity to implement each element in Part II of its Laboratory Management Plan may vary from the procedures described in the eligible academic entity's Laboratory Management Plan, without constituting a violation of Sections R315-262-200 through 216. An eligible academic entity may include additional elements and best management practices in Part II of its Laboratory Management Plan if it chooses.

(a) The eligible academic entity shall implement and comply with the specific provisions of Part I of its Laboratory Management Plan. In Part I of its Laboratory Management Plan, an eligible academic entity shall:

(1) Describe procedures for container labeling in accordance with Subsection R315-262-206(a), as follows:

(i) Identifying whether the eligible academic entity will use the term "unwanted material" on the containers in the laboratory. If not, identify an equally effective term that will be used in lieu of "unwanted material" and consistently by the eligible academic entity. The equally effective term, if used, has the same meaning and is subject to the same requirements as "unwanted material."

(ii) Identifying the manner in which information that is "associated with the container" will be imparted.

(2) Identify whether the eligible academic entity will comply with Subsection R315-262-208(a)(1) or (a)(2) for regularly scheduled removals of unwanted material from the laboratory.

(b) In Part II of its Laboratory Management Plan, an eligible academic entity shall:

(1) Describe its intended best practices for container labeling and management, see the required standards at Section R315-262-206.

(2) Describe its intended best practices for providing training for laboratory workers and students commensurate with their duties, see the required standards at Subsection R315-262-207(a).

(3) Describe its intended best practices for providing training to ensure safe on-site transfers of unwanted material and hazardous waste by trained professionals, see the required standards at Subsection R315-262-207(d)(1).

(4) Describe its intended best practices for removing unwanted material from the laboratory, including:

(i) For regularly scheduled removals-Develop a regular schedule for identifying and removing unwanted materials from its laboratories, see the required standards at Subsections R315-262-208(a)(1) and (a)(2).

(ii) For removals when maximum volumes are exceeded:
(A) Describe its intended best practices for removing unwanted materials from the laboratory within 10 calendar days when unwanted materials have exceeded their maximum volumes, see the required standards at Subsection R315-262-208(d).

(B) Describe its intended best practices for communicating that unwanted materials have exceeded their maximum volumes.

(5) Describe its intended best practices for making hazardous waste determinations, including specifying the duties of the individuals involved in the process, see the required standards at Section R315-262-11 and Sections R315-262-209 through 212.

(6) Describe its intended best practices for laboratory clean-outs, if the eligible academic entity plans to use the incentives for laboratory clean-outs provided in Section R315-262-213, including:

(i) Procedures for conducting laboratory clean-outs, see the required standards at Subsections R315-262-213(a)(1)

through (3); and

(ii) Procedures for documenting laboratory clean-outs, see the required standards at Subsection R315-262-213(a)(4).

(7) Describe its intended best practices for emergency prevention, including:

(i) Procedures for emergency prevention, notification, and response, appropriate to the hazards in the laboratory; and

(ii) A list of chemicals that the eligible academic entity has, or is likely to have, that become more dangerous when they exceed their expiration date and/or as they degrade; and

(iii) Procedures to safely dispose of chemicals that become more dangerous when they exceed their expiration date and/or as they degrade; and

(iv) Procedures for the timely characterization of unknown chemicals.

(c) An eligible academic entity shall make its Laboratory Management Plan available to laboratory workers, students, or any others at the eligible academic entity who request it.

(d) An eligible academic entity shall review and revise its Laboratory Management Plan, as needed.

R315-262-215. Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities -- Unwanted Material that Is Not Solid or Hazardous Waste.

(a) If an unwanted material does not meet the definition of solid waste in Section R315-261-2, it is no longer subject to Sections R315-262-200 through 216 or to Rules R315-260 through 266, 268, or 270.

(b) If an unwanted material does not meet the definition of hazardous waste in Section R315-261-3, it is no longer subject to Sections R315-262-200 through 216 or to Rules R315-260 through 266, 268, or 270, but shall be managed in compliance with any other applicable regulations and/or conditions.

R315-262-216. Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities -- Non-Laboratory Hazardous Waste Generated at an Eligible Academic Entity.

An eligible academic entity that generates hazardous waste outside of a laboratory is not eligible to manage that hazardous waste under Sections R315-262-200 through 216; and

(a) Remains subject to the generator requirements of Section R315-262-11 and Subsection R315-262-34(c) for large quantity generators and small quantity generators, if the hazardous waste is managed in a satellite accumulation area, and all other applicable generator requirements of Rule R315-262, with respect to that hazardous waste; or

(b) Remains subject to the conditional exemption of Subsection R315-261-5(b) for conditionally exempt small quantity generators, with respect to that hazardous waste.

R315-262-217. Appendix.

Appendix to 40 CFR 262, 2015 edition, is adopted and incorporated by reference.

KEY: hazardous waste, generators

April 15, 2016

19-6-105

19-6-106

R315. Environmental Quality, Waste Management and Radiation Control, Waste Management.

R315-263. Standards Applicable to Transporters of Hazardous Waste and Standards Applicable to Emergency Control of Spills for All Hazardous Waste Handlers.

R315-263-10. Scope.

(a) Sections R315-263-11, 12, 20, 21, 22, 25, and 34 establish standards which apply to persons transporting hazardous waste within Utah if the transportation requires a manifest under Rule R315-262.

(b) Sections R315-263-11, 12, 20, 21, 22, 25, and 34 do not apply to on-site transportation of hazardous waste by generators or by owners or operators of permitted hazardous waste management facilities.

(c) A transporter of hazardous waste shall also comply with Rule R315-262 if he:

(1) Transports hazardous waste into Utah; or

(2) Mixes hazardous wastes of different DOT shipping descriptions by placing them into a single container.

(d) A transporter of hazardous waste subject to the manifesting requirements of Rule R315-262, or subject to the waste management standards of Rule R315-273, that is being imported from or exported to any of the countries listed in Subsection R315-262-58(a)(1) for purposes of recovery is subject to Sections R315-263-10 through 12 and to all other relevant requirements of Sections R315-262-80 through 89, including, but not limited to, Section R315-262-84 for movement documents.

(e) Reserved

(f) Reserved

(g) Sections R315-263-30, 31, 32, and 33 apply to all handlers of hazardous waste or material that when spilled may become a hazardous waste.

R315-263-11. EPA Identification Number.

(a) A transporter shall not transport hazardous wastes without having received an EPA identification number from the Director.

(b) A transporter who has not received an EPA identification number may obtain one by applying to the Director using EPA Form 8700-12. Upon receiving the request, the Director shall assign an EPA identification number to the transporter.

R315-263-12. Transfer Facility Requirements.

A transporter who stores manifested shipments of hazardous waste in containers meeting the requirements of Section R315-262-30 at a transfer facility for a period of ten days or less is not subject to regulation under Rules R315-270, 264, 265, and 268 with respect to the storage of those wastes.

R315-263-20. The Manifest System.

(a)(1) Manifest requirement. A transporter may not accept hazardous waste from a generator unless the transporter is also provided with a manifest form; EPA Form 8700-22, and if necessary, EPA Form 8700-22A; signed in accordance with the requirement of Section R315-262-23, or is provided with an electronic manifest that is obtained, completed, and transmitted in accordance with Subsection R315-262-20(a)(3), and signed with a valid and enforceable electronic signature as described in Section R315-262-25.

(2) Exports. In the case of exports other than those subject to Sections R315-262-80 through 89, a transporter may not accept such waste from a primary exporter or other person if he knows the shipment does not conform to the EPA Acknowledgment of Consent; and unless, in addition to a manifest signed by the generator in accordance with Section R315-263-20, the transporter shall also be provided with an EPA Acknowledgment of Consent which, except for shipments

by rail, is attached to the manifest; or shipping paper for exports by water, bulk shipment. For exports of hazardous waste subject to the requirements of Sections R315-262-80 through 89, a transporter may not accept hazardous waste without a tracking document that includes all information required by Section R315-262-84.

(3) Compliance date for form revisions. The revised Manifest form and procedures in Sections R315-260-10, 261-7, 263-20, and 263-21, had an effective date of September 5, 2006.

(4) Use of electronic manifest-legal equivalence to paper forms for participating transporters. Electronic manifests that are obtained, completed, and transmitted in accordance with Subsection R315-262-20(a)(3), and used in accordance with Section R315-263-20 in lieu of EPA Forms 8700-22 and 8700-22A, are the legal equivalent of paper manifest forms bearing handwritten signatures, and satisfy for all purposes any requirement in these regulations to obtain, complete, sign, carry, provide, give, use, or retain a manifest.

(i) Any requirement in these regulations to sign a manifest or manifest certification by hand, or to obtain a handwritten signature, is satisfied by signing with or obtaining a valid and enforceable electronic signature within the meaning of Section R315-262-25.

(ii) Any requirement in these regulations to give, provide, send, forward, or return to another person a copy of the manifest is satisfied when a copy of an electronic manifest is transmitted to the other person by submission to the system.

(iii) Any requirement in these regulations for a manifest to accompany a hazardous waste shipment is satisfied when a copy of an electronic manifest is accessible during transportation and forwarded to the person or persons who are scheduled to receive delivery of the waste shipment, except that to the extent that the Hazardous Materials regulation on shipping papers for carriage by public highway requires transporters of hazardous materials to carry a paper document to comply with 49 CFR 177.817, a hazardous waste transporter shall carry one printed copy of the electronic manifest on the transport vehicle.

(iv) Any requirement in these regulations for a transporter to keep or retain a copy of a manifest is satisfied by the retention of an electronic manifest in the transporter's account on the e-Manifest system, provided that such copies are readily available for viewing and production if requested by any EPA or Utah inspector.

(v) No transporter may be held liable for the inability to produce an electronic manifest for inspection under Section R315-263-20 if that transporter can demonstrate that the inability to produce the electronic manifest is exclusively due to a technical difficulty with the EPA system for which the transporter bears no responsibility.

(5) A transporter may participate in the electronic manifest system either by accessing the electronic manifest system from the transporter's own electronic equipment, or by accessing the electronic manifest system from the equipment provided by a participating generator, by another transporter, or by a designated facility.

(6) Special procedures when electronic manifest is not available. If after a manifest has been originated electronically and signed electronically by the initial transporter, and the electronic manifest system should become unavailable for any reason, then:

(i) The transporter in possession of the hazardous waste when the electronic manifest becomes unavailable shall reproduce sufficient copies of the printed manifest that is carried on the transport vehicle pursuant to Subsection R315-263-20(a)(4)(iii)(A), or obtain and complete another paper manifest for this purpose. The transporter shall reproduce sufficient copies to provide the transporter and all subsequent waste handlers with a copy for their files, plus two additional copies that will be delivered to the designated facility with the

hazardous waste.

(ii) On each printed copy, the transporter shall include a notation in the Special Handling and Additional Description space, Item 14, that the paper manifest is a replacement manifest for a manifest originated in the electronic manifest system, shall include, if not pre-printed on the replacement manifest, the manifest tracking number of the electronic manifest that is replaced by the paper manifest, and shall also include a brief explanation why the electronic manifest was not available for completing the tracking of the shipment electronically.

(iii) A transporter signing a replacement manifest to acknowledge receipt of the hazardous waste shall ensure that each paper copy is individually signed and that a legible handwritten signature appears on each copy.

(iv) From the point at which the electronic manifest is no longer available for tracking the waste shipment, the paper replacement manifest copies shall be carried, signed, retained as records, and given to a subsequent transporter or to the designated facility, following the instructions, procedures, and requirements that apply to the use of all other paper manifests.

(7) Special procedures for electronic signature methods undergoing tests. If a transporter using an electronic manifest signs this manifest electronically using an electronic signature method which is undergoing pilot or demonstration tests aimed at demonstrating the practicality or legal dependability of the signature method, then the transporter shall sign the electronic manifest electronically and also sign with an ink signature the transporter acknowledgement of receipt of materials on the printed copy of the manifest that is carried on the vehicle in accordance with Subsection R315-263-20(a)(4)(iii)(A). This printed copy bearing the generator's and transporter's ink signatures shall also be presented by the transporter to the designated facility to sign in ink to indicate the receipt of the waste materials or to indicate discrepancies. After the owner/operator of the designated facility has signed this printed manifest copy with its ink signature, the printed manifest copy shall be delivered to the designated facility with the waste materials.

(8) Imposition of user fee for electronic manifest use. A transporter who is a user of the electronic manifest may be assessed a user fee by EPA for the origination or processing of each electronic manifest. EPA shall maintain and update from time-to-time the current schedule of electronic manifest user fees, which shall be determined based on current and projected system costs and level of use of the electronic manifest system. The current schedule of electronic manifest user fees shall be published as an appendix to 40 CFR part 262.

(b) Before transporting the hazardous waste, the transporter shall sign and date the manifest acknowledging acceptance of the hazardous waste from the generator. The transporter shall return a signed copy to the generator before leaving the generator's property.

(c) The transporter shall ensure that the manifest accompanies the hazardous waste. In the case of exports, the transporter shall ensure that a copy of the EPA Acknowledgment of Consent also accompanies the hazardous waste.

(d) A transporter who delivers a hazardous waste to another transporter or to the designated facility shall:

(1) Obtain the date of delivery and the handwritten signature of that transporter or of the owner or operator of the designated facility on the manifest; and

(2) Retain one copy of the manifest in accordance with Section R315-263-22; and

(3) Give the remaining copies of the manifest to the accepting transporter or designated facility.

(e) The requirements of Subsections R315-263-20(c), (d) and (f) do not apply to water, bulk shipment, transporters if:

(1) The hazardous waste is delivered by water, bulk

shipment, to the designated facility; and

(2) A shipping paper containing all the information required on the manifest; excluding the EPA identification numbers, generator certification, and signatures; and, for exports, an EPA Acknowledgment of Consent accompanies the hazardous waste; and

(3) The delivering transporter obtains the date of delivery and handwritten signature of the owner or operator of the designated facility on either the manifest or the shipping paper; and

(4) The person delivering the hazardous waste to the initial water, bulk shipment, transporter obtains the date of delivery and signature of the water, bulk shipment, transporter on the manifest and forwards it to the designated facility; and

(5) A copy of the shipping paper or manifest is retained by each water, bulk shipment, transporter in accordance with Section R315-263-22.

(f) For shipments involving rail transportation, the requirements of Subsections R315-263-20(c), (d) and (e) do not apply and the following requirements do apply:

(1) When accepting hazardous waste from a non-rail transporter, the initial rail transporter shall:

(i) Sign and date the manifest acknowledging acceptance of the hazardous waste;

(ii) Return a signed copy of the manifest to the non-rail transporter;

(iii) Forward at least three copies of the manifest to:

(A) The next non-rail transporter, if any; or

(B) The designated facility, if the shipment is delivered to that facility by rail; or

(C) The last rail transporter designated to handle the waste in the United States;

(iv) Retain one copy of the manifest and rail shipping paper in accordance with Section R315-263-22.

(2) Rail transporters shall ensure that a shipping paper containing all the information required on the manifest; excluding the EPA identification numbers, generator certification, and signatures; and, for exports an EPA Acknowledgment of Consent accompanies the hazardous waste at all times. Note: Intermediate rail transporters are not required to sign either the manifest or shipping paper.

(3) When delivering hazardous waste to the designated facility, a rail transporter shall:

(i) Obtain the date of delivery and handwritten signature of the owner or operator of the designated facility on the manifest or the shipping paper, if the manifest has not been received by the facility; and

(ii) Retain a copy of the manifest or signed shipping paper in accordance with Section R315-263-22.

(4) When delivering hazardous waste to a non-rail transporter a rail transporter shall:

(i) Obtain the date of delivery and the handwritten signature of the next non-rail transporter on the manifest; and

(ii) Retain a copy of the manifest in accordance with Section R315-263-22.

(5) Before accepting hazardous waste from a rail transporter, a non-rail transporter shall sign and date the manifest and provide a copy to the rail transporter.

(g) Transporters who transport hazardous waste out of the United States shall:

(1) Sign and date the manifest in the International Shipments block to indicate the date that the shipment left the United States;

(2) Retain one copy in accordance with Subsection R315-263-22(d);

(3) Return a signed copy of the manifest to the generator; and

(4) Give a copy of the manifest to a U.S. Customs official at the point of departure from the United States.

(h) A transporter transporting hazardous waste from a generator who generates greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month need not comply with the requirements of Section 315-263-20 or those of Section R315-263-22 provided that:

(1) The waste is being transported pursuant to a reclamation agreement as provided for in Subsection R315-262-20(e);

(2) The transporter records, on a log or shipping paper, the following information for each shipment:

(i) The name, address, and U.S. EPA Identification Number of the generator of the waste;

(ii) The quantity of waste accepted;

(iii) All DOT-required shipping information;

(iv) The date the waste is accepted; and

(3) The transporter carries this record when transporting waste to the reclamation facility; and

(4) The transporter retains these records for a period of at least three years after termination or expiration of the agreement.

R315-263-21. Compliance with the Manifest.

(a) The transporter shall deliver the entire quantity of hazardous waste which he has accepted from a generator or a transporter to:

(1) The designated facility listed on the manifest; or

(2) The alternate designated facility, if the hazardous waste cannot be delivered to the designated facility because an emergency prevents delivery; or

(3) The next designated transporter; or

(4) The place outside the United States designated by the generator.

(b)(1) If the hazardous waste cannot be delivered in accordance with Subsection R315-263-21(a) because of an emergency condition other than rejection of the waste by the designated facility, then the transporter shall contact the generator for further directions and shall revise the manifest according to the generator's instructions.

(2) If hazardous waste is rejected by the designated facility while the transporter is on the facility's premises, then the transporter shall obtain the following:

(i) For a partial load rejection or for regulated quantities of container residues, a copy of the original manifest that includes the facility's date and signature, and the Manifest Tracking Number of the new manifest that shall accompany the shipment, and a description of the partial rejection or container residue in the discrepancy block of the original manifest. The transporter shall retain a copy of this manifest in accordance with Section R315-263-22, and give the remaining copies of the original manifest to the rejecting designated facility. If the transporter is forwarding the rejected part of the shipment or a regulated container residue to an alternate facility or returning it to the generator, the transporter shall obtain a new manifest to accompany the shipment, and the new manifest shall include all of the information required in Subsections R315-264-72(e)(1) through (6) or (f)(1) through (6) or 40 CFR 265.72(e)(1) through (6) or (f)(1) through (6), which are adopted by reference.

(ii) For a full load rejection that will be taken back by the transporter, a copy of the original manifest that includes the rejecting facility's signature and date attesting to the rejection, the description of the rejection in the discrepancy block of the manifest, and the name, address, phone number, and Identification Number for the alternate facility or generator to whom the shipment shall be delivered. The transporter shall retain a copy of the manifest in accordance with Section R315-263-22, and give a copy of the manifest containing this information to the rejecting designated facility. If the original manifest is not used, then the transporter shall obtain a new

manifest for the shipment and comply with Subsection R[3]315-264-72(e)(1) through (6) or 40 CFR 265.72(e)(1) through (6), which are adopted by reference[-].

R315-263-22. Recordkeeping.

(a) A transporter of hazardous waste shall keep a copy of the manifest signed by the generator, himself, and the next designated transporter or the owner or operator of the designated facility for a period of three years from the date the hazardous waste was accepted by the initial transporter.

(b) For shipments delivered to the designated facility by water, bulk shipment, each water, bulk shipment, transporter shall retain a copy of the shipping paper containing all the information required in Subsection R315-263-20(e)(2) for a period of three years from the date the hazardous waste was accepted by the initial transporter.

(c) For shipments of hazardous waste by rail within the United States:

(1) The initial rail transporter shall keep a copy of the manifest and shipping paper with all the information required in Subsection R315-263-20(f)(2) for a period of three years from the date the hazardous waste was accepted by the initial transporter; and

(2) The final rail transporter shall keep a copy of the signed manifest, or the shipping paper if signed by the designated facility in lieu of the manifest, for a period of three years from the date the hazardous waste was accepted by the initial transporter.

Note: Intermediate rail transporters are not required to keep records pursuant to these regulations.

(d) A transporter who transports hazardous waste out of the United States shall keep a copy of the manifest indicating that the hazardous waste left the United States for a period of three years from the date the hazardous waste was accepted by the initial transporter.

(e) The periods of retention referred to in Section R315-263-22 are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Director.

R315-263-25. Electronic Manifest Signatures.

(a) Electronic manifest signatures shall meet the criteria described in Section R315-262-25.

R315-263-30. Immediate Action.

In the event of a spill of hazardous waste or material which, when spilled, becomes hazardous waste, the person responsible for the material at the time of the spill shall immediately:

(a) Take appropriate action to minimize the threat to human health and the environment.

(b) Notify the Utah State Department of Environmental Quality, 24-hour Answering Service, 801-536- 4123 if the following spill quantities are exceeded:

(1) One kilogram (2.2 pounds) of material listed in R315-261-31, and which is an acute hazardous waste identified with a hazard code of (H), or an acute hazardous Waste identified in R315-261-33(e). Notify for a spill of a lesser quantity if there is a potential threat to human health or the environment; or

(2) One hundred kilograms (220 pounds) of hazardous waste or material which, when spilled, becomes hazardous waste, other than a spill of wastes identified in Subsection R315-263-30(a)(1). Notify for a spill of a lesser quantity if there is a potential threat to human health or the environment.

(c) Provide the following information when reporting the spill:

(1) Name, phone number, and address of person responsible for the spill.

(2) Name, title, and phone number of individual reporting.

(3) Time and date of spill.

(4) Location of spill -- as specific as possible including nearest town, city, highway or waterway.

(5) Description contained on the manifest and the amount of material spilled.

(6) Cause of spill.

(7) Emergency action taken to minimize the threat to human health and the environment.

(d) An air, rail, highway, or water transporter who has discharged hazardous waste shall:

(1) Give notice, if required by 49 CFR 171.15 to the National Response Center, 800-424-8802 or 202- 426-2675; and

(2) Report in writing as required by 49 CFR 171.16 to the Director, Office of Hazardous Materials Regulations, Materials Transportation Bureau, Department of Transportation, Washington, D.C. 20590.

(e) A water, bulk shipment, transporter who has discharged hazardous waste shall give the same notice as required by 33 CFR 153.203 for oil and hazardous substances.

R315-263-31. Spill Clean-up.

The person responsible for the material at the time of the spill shall clean up all the spilled material and any residue or contaminated media or other material resulting from the spill or take action as may be required by the Director so that the spilled material, residue, or contaminated media no longer presents a hazard to human health or the environment as defined in Rule R315-101. The cleanup or other required actions shall be at the expense of the person responsible for the spill. If the person responsible for the spill fails to take the required action, the Department may take action and bill the responsible person.

R315-263-32. Emergency Control Variance.

If a spill of hazardous waste requires immediate removal to protect human health or the environment, as determined by the Director, a variance may be granted by the Director to the manifest and recordkeeping requirements of these rules until the spilled material and any residue or contaminated soil, water or other material resulting from the spill no longer presents an immediate hazard to human health or the environment, as determined by the Director.

R315-263-33. Reporting.

Within 15 days after any spill of hazardous waste or material which, when spilled, becomes hazardous waste, and is reported under Subsection R315-263-30(b), the person responsible for the material at the time of the spill shall submit to the Director a written report which contains the following information:

(a) The person's name, address, and telephone number;

(b) Date, time, location, and nature of the incident;

(c) Name and quantity of material(s) involved;

(d) The extent of injuries, if any;

(e) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and

(f) The estimated quantity and disposition of recovered material that resulted from the incident.

R315-263-34. Compliance with Department of Transportation Regulations.

Transporters of hazardous waste shall comply with the following pertinent regulations of the U.S. Department of Transportation governing the transportation of hazardous materials for both interstate and intrastate shipments:

(a) 49 CFR 171, General Information Regulations and Definitions;

(b) 49 CFR 172, Hazardous Materials Table and Hazardous Material Communications Regulations;

(c) 49 CFR 173, Shippers -- General Requirements for

Shipments and Packaging;

- (d) 49 CFR 174, Carriage by Rail;
- (e) 49 CFR 175, Carriage by Aircraft;
- (f) 49 CFR 176, Carriage by Vessel;
- (g) 49 CFR 177, Carriage by Public Highway;
- (h) 49 CFR 178, Shipping Container Specification; and
- (i) 49 CFR 179, Specifications for Tank Cars.

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19-6-105
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R315. Environmental Quality, Waste Management and Radiation Control, Waste Management.

R315-264. Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities.

R315-264-1. Purpose, Scope and Applicability.

(a) The purpose of Rule R315-264 is to establish minimum State of Utah standards which define the acceptable management of hazardous waste.

(b) The standards in Rule R315-264 apply to owners and operators of all facilities which treat, store, or dispose of hazardous waste, except as specifically provided otherwise in Rules R315-264 or 261.

(c) Reserved.

(d) The requirements of Rule R315-264 apply to a person disposing of hazardous waste by means of underground injection subject to a permit issued under an Underground Injection Control (UIC) program approved or promulgated under the Safe Drinking Water Act only to the extent they are required by 40 CFR 144.14. Rule R315-264 applies to the above-ground treatment or storage of hazardous waste before it is injected underground.

(e) The requirements of Rule R315-264 apply to the owner or operator of a POTW which treats, stores, or disposes of hazardous waste only to the extent they are included in a RCRA permit by rule granted to such a person under Rule R315-270.

(f) Reserved

(g) The requirements of Rule R315-264 do not apply to:

(1) The owner or operator of a facility permitted under Rules R315-301 through 320 to manage municipal or industrial solid waste, if the only hazardous waste the facility treats, stores, or disposes of is excluded from regulation under Section R315-261-5;

(2) The owner or operator of a facility managing recyclable materials described in Subsections R315-261-6(a)(2), (3), and (4), except to the extent they are referred to in Rule R315-15 or Sections R315-266-20 through 23, 70, 80, or 100 through 112.

(3) A generator accumulating waste on-site in compliance with Section R315-262-34;

(4) A farmer disposing of waste pesticides from his own use in compliance with Section R315-262-7; or

(5) The owner or operator of a totally enclosed treatment facility, as defined in Section R315-260-10.

(6) The owner or operator of an elementary neutralization unit or a wastewater treatment unit as defined in Section R315-260-10, provided that if the owner or operator is diluting hazardous ignitable (D001) wastes, other than the D001 High TOC Subcategory defined in Section R315-268-40, or reactive (D003) waste, to remove the characteristic before land disposal, the owner/operator shall comply with the requirements set out in Subsection R315-264-17(b).

(7) Reserved

(8)(i) Except as provided in Subsection R315-264-1(g)(8)(ii), a person engaged in treatment or containment activities during immediate response to any of the following situations:

(A) A discharge of a hazardous waste;

(B) An imminent and substantial threat of a discharge of hazardous waste;

(C) A discharge of a material which, when discharged, becomes a hazardous waste.

(ii) An owner or operator of a facility otherwise regulated by Rule R315-264 shall comply with all applicable requirements of Sections R315-264-30 through 35, 37 and 50 through 56.

(iii) Any person who is covered by Subsection R315-264-1(g)(8)(i) and who continues or initiates hazardous waste treatment or containment activities after the immediate response is over is subject to all applicable requirements of Rule R315-

264 and 40 CFR 122 and 123 and Rule R315-124 for those activities.

(iv) In the case of an explosives or munitions emergency response, if a Federal, State, Tribal or local official acting within the scope of his or her official responsibilities, or an explosives or munitions emergency response specialist, determines that immediate removal of the material or waste is necessary to protect human health or the environment, that official or specialist may authorize the removal of the material or waste by transporters who do not have EPA identification numbers and without the preparation of a manifest. In the case of emergencies involving military munitions, the responding military emergency response specialist's organizational unit shall retain records for three years identifying the dates of the response, the responsible persons responding, the type and description of material addressed, and its disposition.

(9) A transporter storing manifested shipments of hazardous waste in containers meeting the requirements of Section R315-262-30 at a transfer facility for a period of ten days or less.

(10) The addition of absorbent material to waste in a container, as defined in Section R315-260-10, or the addition of waste to absorbent material in a container, provided that these actions occur at the time waste is first placed in the container; and Subsections R315-264-17(b), 264-171, and 264-172 are complied with.

(11) Universal waste handlers and universal waste transporters, as defined in Section R315-260-10, handling the wastes listed below. These handlers are subject to regulation under Rule R315-273, when handling the below listed universal wastes.

(i) Batteries as described in Section R315-273-2;

(ii) Pesticides as described in Section R315-273-3;

(iii) Mercury-containing equipment as described in Section R315-273-4; and

(iv) Lamps as described in Section R315-273-5.

(h) The requirements of Rule R315-264 apply to owners or operators of all facilities which treat, store, or dispose of hazardous wastes referred to in Rule R315-268.

(i) Reserved

(j) The requirements of Sections R315-264-10 through 19, 30 through 37, 50 through 56, and 101 do not apply to remediation waste management sites. However, some remediation waste management sites may be a part of a facility that is subject to a traditional hazardous waste permit because the facility is also treating, storing or disposing of hazardous wastes that are not remediation wastes. In these cases, Sections R315-264-10 through 19, 30 through 37, 50 through 56, and 101 do apply to the facility subject to the traditional hazardous waste permit. Instead of the requirements of Sections R315-264-10 through 19, 30 through 37, and 50 through 56, owners or operators of remediation waste management sites shall:

(1) Obtain an EPA identification number by applying to the Administrator using EPA Form 8700-12;

(2) Obtain a detailed chemical and physical analysis of a representative sample of the hazardous remediation wastes to be managed at the site. At a minimum, the analysis shall contain all of the information which shall be known to treat, store or dispose of the waste according to Rules R315-264 and 268, and shall be kept accurate and up to date;

(3) Prevent people who are unaware of the danger from entering, and minimize the possibility for unauthorized people or livestock to enter onto the active portion of the remediation waste management site, unless the owner or operator can demonstrate to the Director that:

(i) Physical contact with the waste, structures, or equipment within the active portion of the remediation waste management site shall not injure people or livestock who may enter the active portion of the remediation waste management

site; and

(ii) Disturbance of the waste or equipment by people or livestock who enter onto the active portion of the remediation waste management site, shall not cause a violation of the requirements of Rule R315-264;

(4) Inspect the remediation waste management site for malfunctions, deterioration, operator errors, and discharges that may be causing, or may lead to, a release of hazardous waste constituents to the environment, or a threat to human health. The owner or operator shall conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment, and shall remedy the problem before it leads to a human health or environmental hazard. Where a hazard is imminent or has already occurred, the owner/operator shall take remedial action immediately;

(5) Provide personnel with classroom or on-the-job training on how to perform their duties in a way that ensures the remediation waste management site complies with the requirements of Rule R315-264, and on how to respond effectively to emergencies;

(6) Take precautions to prevent accidental ignition or reaction of ignitable or reactive waste, and prevent threats to human health and the environment from ignitable, reactive and incompatible waste;

(7) For remediation waste management sites subject to regulation under Sections R315-264-170 through 179, 190 through 200, 220 through 232, 250 through 259, 270 Through 283, 300 through 317, 340 through 351, and 600 through 603, the owner/operator shall design, construct, operate, and maintain a unit within a 100-year floodplain to prevent washout of any hazardous waste by a 100-year flood, unless the owner/operator can meet the demonstration of Subsection R315-264-18(b);

(8) Not place any non-containerized or bulk liquid hazardous waste in any salt dome formation, salt bed formation, underground mine or cave;

(9) Develop and maintain a construction quality assurance program for all surface impoundments, waste piles and landfill units that are required to comply with Subsections R315-264-221(c) and (d), 264-251(c) and (d), and 264-301(c) and (d) at the remediation waste management site, according to the requirements of Section R315-264-19;

(10) Develop and maintain procedures to prevent accidents and a contingency and emergency plan to control accidents that occur. These procedures shall address proper design, construction, maintenance, and operation of remediation waste management units at the site. The goal of the plan shall be to minimize the possibility of, and the hazards from a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water that could threaten human health or the environment. The plan shall explain specifically how to treat, store and dispose of the hazardous remediation waste in question, and shall be implemented immediately whenever a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment;

(11) Designate at least one employee, either on the facility premises or on call (that is, available to respond to an emergency by reaching the facility quickly), to coordinate all emergency response measures. This emergency coordinator shall be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person shall have the authority to commit the resources needed to carry out the contingency plan;

(12) Develop, maintain and implement a plan to meet the requirements in Subsections R315-264-1(j)(2) through (j)(6)

and (j)(9) through (j)(10); and

(13) Maintain records documenting compliance with Subsections R315-264-1(j)(1) through (j)(12).

R315-264-3. Relationship to Interim Status Standards.

A facility owner or operator who has fully complied with the requirements for interim status-as defined in section 3005(e) of RCRA and regulations under Section R315-270-70-shall comply with the regulations specified in Rule 265 in lieu of the regulations in Rule R315-264, until final administrative disposition of his permit application is made, except as provided under Sections R315-264-550 through 555.

R315-264-4. Imminent Hazard Action.

Notwithstanding any other provisions of these regulations, enforcement actions may be brought pursuant to Section 19-5-115.

R315-264-10. Applicability.

(a) The regulations in Sections R315-264-10 through 19 apply to owners and operators of all hazardous waste facilities, except as provided in Section R315-264-1 and in Subsection R315-264-10(b).

(b) Subsection R315-264-18(b) applies only to facilities subject to regulation under Sections R315-264-170 through 179, 190 through 200, 220 through 232, 250 through 259, 270 through 283, 300 through 317, 340 through 351, and 600 through 603.

R315-264-11. Identification Number.

Every facility owner or operator shall apply to Director for an EPA identification number using EPA form 8700-12. Information on obtaining this number can be acquired by contacting the Utah Division of Waste Management and Radiation Control.

R315-264-12. Required Notices.

(a)(1) The owner or operator of a facility that has arranged to receive hazardous waste from a foreign source shall notify the Director in writing at least four weeks in advance of the date the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source is not required.

(2) The owner or operator of a recovery facility that has arranged to receive hazardous waste subject to Sections R315-262-80 through 89 shall provide a copy of the movement document bearing all required signatures to the foreign exporter; to the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue, NW., Washington, DC 20460; and to the competent authorities of all other countries concerned within three working days of receipt of the shipment. The original of the signed movement document shall be maintained at the facility for at least three years. In addition, such owner or operator shall, as soon as possible, but no later than thirty (30) days after the completion of recovery and no later than one (1) calendar year following the receipt of the hazardous waste, send a certificate of recovery to the foreign exporter and to the competent authority of the country of export and to EPA's Office of Enforcement and Compliance Assurance at the above address by mail, e-mail without a digital signature followed by mail, or fax followed by mail.

(b) The owner or operator of a facility that receives hazardous waste from an off-site source, except where the owner or operator is also the generator, shall inform the generator in writing that he has the appropriate permit(s) for, and will accept, the waste the generator is shipping. The owner or operator shall keep a copy of this written notice as part of the operating record.

(c) Before transferring ownership or operation of a facility during its operating life, or of a disposal facility during the post-closure care period, the owner or operator shall notify the new owner or operator in writing of the requirements of Rule R315-264 and Rule R315-270. An owner's or operator's failure to notify the new owner or operator of the requirements of Rule R315-264 in no way relieves the new owner or operator of his obligation to comply with all applicable requirements.

R315-264-13. General Waste Analysis.

(a)(1) Before an owner or operator treats, stores, or disposes of any hazardous wastes, or nonhazardous wastes if applicable under Subsection R315-264-113(d), he shall obtain a detailed chemical and physical analysis of a representative sample of the wastes. At a minimum, the analysis shall contain all the information which shall be known to treat, store, or dispose of the waste in accordance with Rules R315-264 and 268.

(2) The analysis may include data developed under Rule R315-261, and existing published or documented data on the hazardous waste or on hazardous waste generated from similar processes. For example, the facility's records of analyses performed on the waste before the effective date of these regulations, or studies conducted on hazardous waste generated from processes similar to that which generated the waste to be managed at the facility, may be included in the data base required to comply with Subsection R315-264-13(a)(1). The owner or operator of an off-site facility may arrange for the generator of the hazardous waste to supply part of the information required by Subsection R315-264-13(a)(1), except as otherwise specified in Subsections R315-268-7(b) and (c). If the generator does not supply the information, and the owner or operator chooses to accept a hazardous waste, the owner or operator is responsible for obtaining the information required to comply with Section R315-264-13.

(3) The analysis shall be repeated as necessary to ensure that it is accurate and up to date. At a minimum, the analysis shall be repeated:

(i) When the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous wastes, or non-hazardous wastes if applicable under Subsection R315-264-113(d), has changed; and

(ii) For off-site facilities, when the results of the inspection required in Subsection R315-264-13(a)(4) indicate that the hazardous waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.

(4) The owner or operator of an off-site facility shall inspect and, if necessary, analyze each hazardous waste movement received at the facility to determine whether it matches the identity of the waste specified on the accompanying manifest or shipping paper.

(b) The owner or operator shall develop and follow a written waste analysis plan which describes the procedures which he will carry out to comply with Subsection R315-264-13(a). He shall keep this plan at the facility. At a minimum, the plan shall specify:

(1) The parameters for which each hazardous waste, or non-hazardous waste if applicable under Subsection R315-264-113(d), will be analyzed and the rationale for the selection of these parameters, i.e., how analysis for these parameters will provide sufficient information on the waste's properties to comply with Subsection R315-264-13(a);

(2) The test methods which will be used to test for these parameters;

(3) The sampling method which will be used to obtain a representative sample of the waste to be analyzed. A representative sample may be obtained using either:

(i) One of the sampling methods described in appendix I

of Rule R315-261; or

(ii) An equivalent sampling method. See Section R315-260-21 for related discussion.

(4) The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up to date; and

(5) For off-site facilities, the waste analyses that hazardous waste generators have agreed to supply.

(6) Where applicable, the methods that will be used to meet the additional waste analysis requirements for specific waste management methods as specified in Sections R315-264-17, 264-314, 264-341, 264-1083, and 268-7 and Subsections R315-264-1034(d) and 264-1063(d).

(7) For surface impoundments exempted from land disposal restrictions under Subsection R315-268-4(a), the procedures and schedules for:

(i) The sampling of impoundment contents;

(ii) The analysis of test data; and

(iii) The annual removal of residues which are not delisted under Section R315-260-22 or which exhibit a characteristic of hazardous waste and either:

(A) Do not meet applicable treatment standards of Sections R315-268-40 through 49; or

(B) Where no treatment standards have been established:

(I) Such residues are prohibited from land disposal under Section R315-268-32 or RCRA section 3004(d); or

(II) Such residues are prohibited from land disposal under Subsection R315-268-33(f).

(8) For owners and operators seeking an exemption to the air emission standards of Sections R315-264-1080 through 1091 in accordance with Section R315-264-1082:

(i) If direct measurement is used for the waste determination, the procedures and schedules for waste sampling and analysis, and the results of the analysis of test data to verify the exemption.

(ii) If knowledge of the waste is used for the waste determination, any information prepared by the facility owner or operator or by the generator of the hazardous waste, if the waste is received from off-site, that is used as the basis for knowledge of the waste.

(c) For off-site facilities, the waste analysis plan required in Subsection R315-264-13(b) shall also specify the procedures which will be used to inspect and, if necessary, analyze each movement of hazardous waste received at the facility to ensure that it matches the identity of the waste designated on the accompanying manifest or shipping paper. At a minimum, the plan shall describe:

(1) The procedures which will be used to determine the identity of each movement of waste managed at the facility; and

(2) The sampling method which will be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling.

(3) The procedures that the owner or operator of an off-site landfill receiving containerized hazardous waste will use to determine whether a hazardous waste generator or treater has added a biodegradable sorbent to the waste in the container.

R315-264-14. Security.

(a) The owner or operator shall prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of his facility, unless he can demonstrate to the Director that:

(1) Physical contact with the waste, structures, or equipment within the active portion of the facility will not injure unknowing or unauthorized persons or livestock which may enter the active portion of a facility; and

(2) Disturbance of the waste or equipment, by the unknowing or unauthorized entry of persons or livestock onto the active portion of a facility, will not cause a violation of the

requirements of Rule R315-264. An owner or operator who wishes to make the demonstration referred to above shall do so with part B of the permit application.

(b) Unless the owner or operator has made a successful demonstration under Subsection R315-264-14(a)(1) and (2), a facility shall have:

(1) A 24-hour surveillance system, e.g., television monitoring or surveillance by guards or facility personnel, which continuously monitors and controls entry onto the active portion of the facility; or

(2)(i) An artificial or natural barrier, e.g., a fence in good repair or a fence combined with a cliff, which completely surrounds the active portion of the facility; and

(ii) A means to control entry, at all times, through the gates or other entrances to the active portion of the facility, e.g., an attendant, television monitors, locked entrance, or controlled roadway access to the facility. The requirements of Subsection R315-264-14(b) are satisfied if the facility or plant within which the active portion is located itself has a surveillance system, or a barrier and a means to control entry, which complies with the requirements of Subsection R315-264-14(b)(1) or (2).

(c) Unless the owner or operator has made a successful demonstration under Subsection R315-264-14(a)(1) and (2), a sign with the legend, "Danger-Unauthorized Personnel Keep Out", shall be posted at each entrance to the active portion of a facility, and at other locations, in sufficient numbers to be seen from any approach to this active portion. The legend shall be written in English and in any other language predominant in the area surrounding the facility, e.g., facilities in counties bordering the Canadian province of Quebec shall post signs in French; facilities in counties bordering Mexico shall post signs in Spanish, and shall be legible from a distance of at least 25 feet. Existing signs with a legend other than "Danger-Unauthorized Personnel Keep Out" may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion, and that entry onto the active portion can be dangerous. See Subsection R315-264-117(b) for discussion of security requirements at disposal facilities during the post-closure care period.

R315-264-15. General Inspection Requirements.

(a) The owner or operator shall inspect his facility for malfunctions and deterioration, operator errors, and discharges which may be causing or may lead to release of hazardous waste constituents to the environment or a threat to human health. The owner or operator shall conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

(b)(1) The owner or operator shall develop and follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment, such as dikes and sump pumps, that are important to preventing, detecting, or responding to environmental or human health hazards.

(2) He shall keep this schedule at the facility.

(3) The schedule shall identify the types of problems, e.g., malfunctions or deterioration, which are to be looked for during the inspection, e.g., inoperative sump pump, leaking fitting, eroding dike, etc.

(4) The frequency of inspection may vary for the items on the schedule. However, the frequency should be based on the rate of deterioration of the equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, shall be inspected daily when in use. At a minimum, the inspection schedule shall include the items and frequencies called for in Sections R315-264-174, 193, 195, 226, 254, 278, 303, 347, 602, 1033, 1052, 1053, 1058, and 1083

through 1089. Rule R315-270 requires the inspection schedule to be submitted with part B of the permit application. The Director shall evaluate the schedule along with the rest of the application to ensure that it adequately protects human health and the environment. As part of this review, The Director may modify or amend the schedule as may be necessary.

(c) The owner or operator shall remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action shall be taken immediately.

(d) The owner or operator shall record inspections in an inspection log or summary. He shall keep these records for at least three years from the date of inspection. At a minimum, these records shall include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

R315-264-16. Personnel Training.

(a)(1) Facility personnel shall successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of Rule R315-264. The owner or operator shall ensure that this program includes all the elements described in the document required under Subsection R315-264-16(d)(3). Rule R315-270 requires that owners and operators submit with part B of the RCRA permit application, an outline of the training program used, or to be used, at the facility and a brief description of how the training program is designed to meet actual job tasks.

(2) This program shall be directed by a person trained in hazardous waste management procedures, and shall include instruction which teaches facility personnel hazardous waste management procedures, including contingency plan implementation, relevant to the positions in which they are employed.

(3) At a minimum, the training program shall be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including, where applicable:

- (i) Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;
 - (ii) Key parameters for automatic waste feed cut-off systems;
 - (iii) Communications or alarm systems;
 - (iv) Response to fires or explosions;
 - (v) Response to ground-water contamination incidents;
- and
- (vi) Shutdown of operations.

(4) For facility employees that receive emergency response training pursuant to Occupational Safety and Health Administration (OSHA) regulations 29 CFR 1910.120(p)(8) and 1910.120(q), the facility is not required to provide separate emergency response training pursuant to Section R315-264-16, provided that the overall facility training meets all the requirements Section R315-264-16.

(b) Facility personnel shall successfully complete the program required in Subsection R315-264-16(a) within six months after the effective date of these regulations or six months after the date of their employment or assignment to a facility, or to a new position at a facility, whichever is later. Employees hired after the effective date of these regulations shall not work in unsupervised positions until they have completed the training requirements of Subsection R315-264-16(a).

(c) Facility personnel shall take part in an annual review of the initial training required in Subsection R315-264-16(a).

(d) The owner or operator shall maintain the following

documents and records at the facility:

(1) The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job;

(2) A written job description for each position listed under Subsection R315-264-16(d)(1). This description may be consistent in its degree of specificity with descriptions for other similar positions in the same company location or bargaining unit, but shall include the requisite skill, education, or other qualifications, and duties of employees assigned to each position;

(3) A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed under Subsection R315-264-16(d)(1);

(4) Records that document that the training or job experience required under Subsections R315-264-16(a), (b), and (c) has been given to, and completed by, facility personnel.

(e) Training records on current personnel shall be kept until closure of the facility; training records on former employees shall be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

R315-264-17. General Requirements for Ignitable, Reactive, or Incompatible Wastes.

(a) The owner or operator shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste shall be separated and protected from sources of ignition or reaction including but not limited to: open flames; smoking; cutting and welding; hot surfaces; frictional heat; sparks, static, electrical, or mechanical; spontaneous ignition, e.g., from heat-producing chemical reactions; and radiant heat. While ignitable or reactive waste is being handled, the owner or operator shall confine smoking and open flame to specially designated locations. "No Smoking" signs shall be conspicuously placed wherever there is a hazard from ignitable or reactive waste.

(b) Where specifically required by other sections of Rule R315-264, the owner or operator of a facility that treats, stores or disposes ignitable or reactive waste, or mixes incompatible waste or incompatible wastes and other materials, shall take precautions to prevent reactions which:

- (1) Generate extreme heat or pressure, fire or explosions, or violent reactions;
- (2) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;
- (3) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
- (4) Damage the structural integrity of the device or facility;
- (5) Through other like means threaten human health or the environment.

(c) When required to comply with Subsections R315-264-17(a) or (b), the owner or operator shall document that compliance. This documentation may be based on references to published scientific or engineering literature, data from trial tests, e.g., bench scale or pilot scale tests, waste analyses, as specified in Section R315-264-264-13, or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.

R315-264-18. Location Standards.

(a) Seismic considerations.

(1) Portions of new facilities where treatment, storage, or disposal of hazardous waste will be conducted shall not be located within 61 meters (200 feet) of a fault which has had displacement in Holocene time. Procedures for demonstrating

compliance with this standard in part B of the permit application are specified in Subsection R315-270-14(b)(11). Facilities which are located in political jurisdictions other than those listed in appendix VI of Rule R315-264, are assumed to be in compliance with this requirement.

(2) As used in Subsection R315-264-18(a)(1):

(i) "Fault" means a fracture along which rocks on one side have been displaced with respect to those on the other side.

(ii) "Displacement" means the relative movement of any two sides of a fault measured in any direction.

(iii) "Holocene" means the most recent epoch of the Quaternary period, extending from the end of the Pleistocene to the present.

(b) Floodplains.

(1) A facility located in a 100-year floodplain shall be designed, constructed, operated, and maintained to prevent washout of any hazardous waste by a 100-year flood, unless the owner or operator can demonstrate to the Director's satisfaction that:

(i) Procedures are in effect which will cause the waste to be removed safely, before flood waters can reach the facility, to a location where the wastes will not be vulnerable to flood waters, provided that the facility where the waste is moved is a permitted hazardous waste disposal facility or a facility in interim status; or

(ii) For existing surface impoundments, waste piles, land treatment units, landfills, and miscellaneous units, no adverse effects on human health or the environment will result if washout occurs, considering:

(A) The volume and physical and chemical characteristics of the waste in the facility;

(B) The concentration of hazardous constituents that would potentially affect surface waters as a result of washout;

(C) The impact of such concentrations on the current or potential uses of and water quality standards established for the affected surface waters; and

(D) The impact of hazardous constituents on the sediments of affected surface waters or the soils of the 100-year floodplain that could result from washout.

(2) As used in Subsection R315-264-18(b)(1):

(i) "100-year floodplain" means any land area which is subject to a one percent or greater chance of flooding in any given year from any source.

(ii) "Washout" means the movement of hazardous waste from the active portion of the facility as a result of flooding.

(iii) "100-year flood" means a flood that has a one percent chance of being equalled or exceeded in any given year.

(c) Salt dome formations, salt bed formations, underground mines and caves. The placement of any noncontainerized or bulk liquid hazardous waste in any salt dome formation, salt bed formation, underground mine or cave is prohibited, except for the Department of Energy Waste Isolation Pilot Project in New Mexico.

R315-264-19. Construction Quality Assurance Program.

(a) CQA program.

(1) A construction quality assurance (CQA) program is required for all surface impoundment, waste pile, and landfill units that are required to comply with Subsections R315-264-221(c) and (d), 264-251(c) and (d), and 264-301(c) and (d). The program shall ensure that the constructed unit meets or exceeds all design criteria and specifications in the permit. The program shall be developed and implemented under the direction of a CQA officer who is a registered professional engineer.

(2) The CQA program shall address the following physical components, where applicable:

(i) Foundations;

(ii) Dikes;

(iii) Low-permeability soil liners;

(iv) Geomembranes, flexible membrane liners;

(v) Leachate collection and removal systems and leak detection systems; and

(vi) Final cover systems.

(b) Written CQA plan. The owner or operator of units subject to the CQA program under Subsection R315-264-19(a) shall develop and implement a written CQA plan. The plan shall identify steps that will be used to monitor and document the quality of materials and the condition and manner of their installation. The CQA plan shall include:

(1) Identification of applicable units, and a description of how they will be constructed.

(2) Identification of key personnel in the development and implementation of the CQA plan, and CQA officer qualifications.

(3) A description of inspection and sampling activities for all unit components identified in Subsection R315-264-19(a)(2), including observations and tests that will be used before, during, and after construction to ensure that the construction materials and the installed unit components meet the design specifications. The description shall cover: Sampling size and locations; frequency of testing; data evaluation procedures; acceptance and rejection criteria for construction materials; plans for implementing corrective measures; and data or other information to be recorded and retained in the operating record under Sections R315-264-73.

(c) Contents of program.

(1) The CQA program shall include observations, inspections, tests, and measurements sufficient to ensure:

(i) Structural stability and integrity of all components of the unit identified in Subsection R315-264-19(a)(2);

(ii) Proper construction of all components of the liners, leachate collection and removal system, leak detection system, and final cover system, according to permit specifications and good engineering practices, and proper installation of all components, e.g., pipes, according to design specifications;

(iii) Conformity of all materials used with design and other material specifications under Sections R315-264-221, 264-251, and 264-301.

(2) The CQA program shall include test fills for compacted soil liners, using the same compaction methods as in the full scale unit, to ensure that the liners are constructed to meet the hydraulic conductivity requirements of Subsections R315-264-221(c)(1)(i)(B), 264-251(c)(1)(i)(B), and 264-301(c)(1)(i)(B) in the field. Compliance with the hydraulic conductivity requirements shall be verified by using in-situ testing on the constructed test fill. The Director may accept an alternative demonstration, in lieu of a test fill, where data are sufficient to show that a constructed soil liner will meet the hydraulic conductivity requirements of Subsections R315-264-221(c)(1)(i)(B), 264-251(c)(1)(i)(B), and 264-301(c)(1)(i)(B) in the field.

(d) Certification. Waste shall not be received in a unit subject to Section R315-26419 until the owner or operator has submitted to the Director by certified mail or hand delivery a certification signed by the CQA officer that the approved CQA plan has been successfully carried out and that the unit meets the requirements of Subsections R315-264-221 (c) or (d), 264-251 (c) or (d), or 264-301 (c) or (d); and the procedure in Subsection R315-270-30(l)(2)(ii) has been completed. Documentation supporting the CQA officer's certification shall be furnished to the Director upon request.

R315-264-30. Applicability.

The regulations in Sections R316-264-30 through 37 apply to owners and operators of all hazardous waste facilities, except as Section R315-264-1 provides otherwise.

R315-264-31. Design and Operation of Facility.

Facilities shall be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

R315-264-32. Required Equipment.

All facilities shall be equipped with the following, unless it can be demonstrated to the Director that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:

(a) An internal communications or alarm system capable of providing immediate emergency instruction, voice or signal, to facility personnel;

(b) A device, such as a telephone, immediately available at the scene of operations, or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams;

(c) Portable fire extinguishers, fire control equipment; including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals; spill control equipment; and decontamination equipment; and

(d) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.

Rule R315-270 requires that an owner or operator who wishes to make the demonstration referred to above shall do so with part B of the permit application.

R315-264-33. Testing and Maintenance of Equipment.

All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, shall be tested and maintained as necessary to assure its proper operation in time of emergency.

R315-264-34. Access to Communications or Alarm System.

(a) Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation shall have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless the Director has ruled that such a device is not required under Section R315-264-32.

(b) If there is ever just one employee on the premises while the facility is operating, he shall have immediate access to a device, such as a telephone, immediately available at the scene of operation, or a hand-held two-way radio, capable of summoning external emergency assistance, unless the Director has ruled that such a device is not required under Section R315-264-32.

R315-264-35. Required Aisle Space.

The owner or operator shall maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the Director that aisle space is not needed for any of these purposes. This demonstration shall be made with the part B permit application.

R315-264-37. Arrangements with Local Authorities.

(a) The owner or operator shall attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations:

(1) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility,

properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;

(2) Where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority;

(3) Agreements with State emergency response teams, emergency response contractors, and equipment suppliers; and

(4) Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

(b) Where State or local authorities decline to enter into such arrangements, the owner or operator shall document the refusal in the operating record.

R315-264-50. Contingency Plan and Emergency Procedures -- Applicability.

The regulations in Sections R315-264-50 through 56 apply to owners and operators of all hazardous waste facilities, except as Section R315-264-1 provides otherwise.

R315-264-51. Purpose and Implementation of Contingency Plan.

(a) Each owner or operator shall have a contingency plan for his facility. The contingency plan shall be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.

(b) The provisions of the plan shall be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

R315-264-52. Content of Contingency Plan.

(a) The contingency plan shall describe the actions facility personnel shall take to comply with Sections R315-264-51 and 56 in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility.

(b) If the owner or operator has already prepared a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with 40 CFR 112, or some other emergency or contingency plan, he need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of Rule R315-264. The owner or operator may develop one contingency plan which meets all regulatory requirements. EPA recommends that the plan be based on the National Response Team's Integrated Contingency Plan Guidance ("One Plan"). When modifications are made to non-RCRA provisions in an integrated contingency plan, the changes do not trigger the need for a RCRA permit modification.

(c) The plan shall describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services, pursuant to Section R315-264-37.

(d) The plan shall list names, addresses, and phone numbers, office and home, of all persons qualified to act as emergency coordinator, see Section R315-264-55, and this list shall be kept up to date. Where more than one person is listed, one shall be named as primary emergency coordinator and others shall be listed in the order in which they will assume responsibility as alternates. For new facilities, this information shall be supplied to the Director at the time of certification,

rather than at the time of permit application.

(e) The plan shall include a list of all emergency equipment at the facility; such as fire extinguishing systems, spill control equipment, communications and alarm systems, internal and external, and decontamination equipment; where this equipment is required. This list shall be kept up to date. In addition, the plan shall include the location and a physical description of each item on the list, and a brief outline of its capabilities.

(f) The plan shall include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan shall describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes, in cases where the primary routes could be blocked by releases of hazardous waste or fires.

R315-264-53. Copies of Contingency Plan.

A copy of the contingency plan and all revisions to the plan shall be:

- (a) Maintained at the facility;
- (b) Submitted to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services; and
- (c) Made available upon request. The contingency plan shall be submitted to the Director with Part B of the permit application under Rule R315-270 and, after modification or approval, will become a condition of any permit issued.

R315-264-54. Amendment of Contingency Plan.

The contingency plan shall be reviewed, and immediately amended, if necessary, whenever:

- (a) The facility permit is revised;
- (b) The plan fails in an emergency;
- (c) The facility changes-in its design, construction, operation, maintenance, or other circumstances-in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;
- (d) The list of emergency coordinators changes; or
- (e) The list of emergency equipment changes.

R315-264-55. Emergency Coordinator.

At all times, there shall be at least one employee either on the facility premises or on call, i.e., available to respond to an emergency by reaching the facility within a short period of time, with the responsibility for coordinating all emergency response measures. This emergency coordinator shall be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person shall have the authority to commit the resources needed to carry out the contingency plan. The emergency coordinator's responsibilities are more fully spelled out in Section R315-264-56. Applicable responsibilities for the emergency coordinator vary, depending on factors such as type and variety of waste(s) handled by the facility, and type and complexity of the facility.

R315-264-56. Emergency Procedures.

(a) Whenever there is an imminent or actual emergency situation, the emergency coordinator, or his designee when the emergency coordinator is on call, shall immediately:

- (1) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and
- (2) Notify appropriate State or local agencies with designated response roles if their help is needed.

(b) Whenever there is a release, fire, or explosion, the emergency coordinator shall immediately identify the character,

exact source, amount, and areal extent of any released materials. He may do this by observation or review of facility records or manifests, and, if necessary, by chemical analysis.

(c) Concurrently, the emergency coordinator shall assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment shall consider both direct and indirect effects of the release, fire, or explosion, e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-off from water or chemical agents used to control fire and heat-induced explosions.

(d) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he shall report his findings as follows:

(1) If his assessment indicates that evacuation of local areas may be advisable, he shall immediately notify appropriate local authorities. He shall be available to help appropriate officials decide whether local areas should be evacuated; and

(2) He shall immediately notify Utah Department of Environmental Quality as specified in Section R315-263-33 and either the government official designated as the on-scene coordinator for that geographical area, or the National Response Center (using their 24-hour toll free number 800/424-8802). The report shall include:

- (i) Name and telephone number of reporter;
- (ii) Name and address of facility;
- (iii) Time and type of incident (e.g., release, fire);
- (iv) Name and quantity of material(s) involved, to the extent known;
- (v) The extent of injuries, if any; and
- (vi) The possible hazards to human health, or the environment, outside the facility.

(e) During an emergency, the emergency coordinator shall take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures shall include, where applicable, stopping processes and operations, collecting and containing release waste, and removing or isolating containers.

(f) If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator shall monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

(g) Immediately after an emergency, the emergency coordinator shall provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility. Unless the owner or operator can demonstrate, in accordance with Subsection R315-261-3(c) or (d), that the recovered material is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and shall manage it in accordance with all applicable requirements of Rules R315-262, 263, and 264.

(h) The emergency coordinator shall ensure that, in the affected area(s) of the facility:

(1) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and

(2) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

(i) The owner or operator shall note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, he shall submit a written report on the incident to the Director. The report shall include:

(1) Name, address, and telephone number of the owner or operator;

- (2) Name, address, and telephone number of the facility;
- (3) Date, time, and type of incident (e.g., fire, explosion);
- (4) Name and quantity of material(s) involved;
- (5) The extent of injuries, if any;
- (6) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
- (7) Estimated quantity and disposition of recovered material that resulted from the incident.

(j) The facility owner or operator shall notify the Director and other appropriate federal, State, and local authorities, that the facility is in compliance with R315-264-56(h) before operations are resumed in the affected area(s) of the facility.

R315-264-70. Manifest System, Recordkeeping, and Reporting -- Applicability.

(a) The regulations in Sections R315-264-70 through 77 apply to owners and operators of both on-site and off-site facilities, except as Section R315-264-1 provides otherwise. Sections R315-264-71, 72, and 76 do not apply to owners and operators of on-site facilities that do not receive any hazardous waste from off-site sources. Subsection R315-264-73(b) only applies to permittees who treat, store, or dispose of hazardous wastes on-site where such wastes were generated.

R315-264-71. Use of Manifest System.

(a)(1) If a facility receives hazardous waste accompanied by a manifest, the owner, operator or his/her agent shall sign and date the manifest as indicated in Subsection R315-264-71(a)(2) to certify that the hazardous waste covered by the manifest was received, that the hazardous waste was received except as noted in the discrepancy space of the manifest, or that the hazardous waste was rejected as noted in the manifest discrepancy space.

(2) If the facility receives a hazardous waste shipment accompanied by a manifest, the owner, operator, or his agent shall:

- (i) Sign and date, by hand, each copy of the manifest;
- (ii) Note any discrepancies, as defined in Subsection R315-264-72(a), on each copy of the manifest;
- (iii) Immediately give the transporter at least one copy of the manifest;
- (iv) Within 30 days of delivery, send a copy, Page 3, of the manifest to the generator,
- (v) Within 30 days of delivery, send the top copy, Page 1, of the Manifest to the e-Manifest system for purposes of data entry and processing. In lieu of mailing this paper copy to EPA, the owner or operator may transmit to the EPA system an image file of Page 1 of the manifest, or both a data string file and the image file corresponding to Page 1 of the manifest. Any data or image files transmitted to EPA under Subsection R315-264-71(a) shall be submitted in data file and image file formats that are acceptable to EPA and that are supported by EPA's electronic reporting requirements and by the electronic manifest system.
- (vi) Retain at the facility a copy of each manifest for at least three years from the date of delivery.

(3) If a facility receives hazardous waste imported from a foreign source, the receiving facility shall mail a copy of the manifest and documentation confirming EPA's consent to the import of hazardous waste to the following address within thirty days of delivery: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue, NW., Washington, DC 20460 and Utah Division of Waste Management and Radiation Control, P O Box 144880, Salt Lake City, Utah 84114-4880.

(b) If a facility receives, from a rail or water (bulk shipment) transporter, hazardous waste which is accompanied by a shipping paper containing all the information required on

the manifest; excluding the EPA identification numbers, generator's certification, and signatures; the owner or operator, or his agent, shall:

(1) Sign and date each copy of the manifest or shipping paper, if the manifest has not been received, to certify that the hazardous waste covered by the manifest or shipping paper was received;

(2) Note any significant discrepancies, as defined in Subsection R315-264-72(a), in the manifest or shipping paper, if the manifest has not been received, on each copy of the manifest or shipping paper. The Director does not intend that the owner or operator of a facility whose procedures under R315-264-13(c) include waste analysis shall perform that analysis before signing the shipping paper and giving it to the transporter. Subsection R315-264-72(b), however, requires reporting an unreconciled discrepancy discovered during later analysis.

(3) Immediately give the rail or water (bulk shipment) transporter at least one copy of the manifest or shipping paper, if the manifest has not been received;

(4) Within 30 days after the delivery, send a copy of the signed and dated manifest or a signed and dated copy of the shipping paper, if the manifest has not been received within 30 days after delivery, to the generator; and

Comment: Subsection R315-262-23(c) requires the generator to send three copies of the manifest to the facility when hazardous waste is sent by rail or water (bulk shipment).

(5) Retain at the facility a copy of the manifest and shipping paper, if signed in lieu of the manifest at the time of delivery, for at least three years from the date of delivery.

(c) Whenever a shipment of hazardous waste is initiated from a facility, the owner or operator of that facility shall comply with the requirements of Rule R315-262. The provisions of Section R315-262-34 are applicable to the on-site accumulation of hazardous wastes by generators. Therefore, the provisions of Section R315-262-34 only apply to owners or operators who are shipping hazardous waste which they generated at that facility.

(d) Within three working days of the receipt of a shipment subject to Sections R315-262-80 through 89 the owner or operator of a facility shall provide a copy of the movement document bearing all required signatures to the exporter, to the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, and to competent authorities of all other concerned countries. The original copy of the movement document shall be maintained at the facility for at least three years from the date of signature.

(e) A facility shall determine whether the consignment state for a shipment regulates any additional wastes, beyond those regulated Federally, as hazardous wastes under its state hazardous waste program. Facilities shall also determine whether the consignment state or generator state requires the facility to submit any copies of the manifest to these states.

(f) Legal equivalence to paper manifests. Electronic manifests that are obtained, completed, and transmitted in accordance with Subsection R315-262-20(a)(3), and used in accordance with Section R315-264-71 in lieu of the paper manifest form are the legal equivalent of paper manifest forms bearing handwritten signatures, and satisfy for all purposes any requirement in these regulations to obtain, complete, sign, provide, use, or retain a manifest.

(1) Any requirement in these regulations for the owner or operator of a facility to sign a manifest or manifest certification by hand, or to obtain a handwritten signature, is satisfied by signing with or obtaining a valid and enforceable electronic signature within the meaning of Section R315-262-25.

(2) Any requirement in these regulations to give, provide,

send, forward, or to return to another person a copy of the manifest is satisfied when a copy of an electronic manifest is transmitted to the other person.

(3) Any requirement in these regulations for a manifest to accompany a hazardous waste shipment is satisfied when a copy of an electronic manifest is accessible during transportation and forwarded to the person or persons who are scheduled to receive delivery of the waste shipment.

(4) Any requirement in these regulations for an owner or operator to keep or retain a copy of each manifest is satisfied by the retention of the facility's electronic manifest copies in its account on the e-Manifest system, provided that such copies are readily available for viewing and production if requested by any EPA or Division of Waste Management and Radiation Control inspector.

(5) No owner or operator may be held liable for the inability to produce an electronic manifest for inspection under Section R315-264-71 if the owner or operator can demonstrate that the inability to produce the electronic manifest is due exclusively to a technical difficulty with the electronic manifest system for which the owner or operator bears no responsibility.

(g) An owner or operator may participate in the electronic manifest system either by accessing the electronic manifest system from the owner's or operator's electronic equipment, or by accessing the electronic manifest system from portable equipment brought to the owner's or operator's site by the transporter who delivers the waste shipment to the facility.

(h) Special procedures applicable to replacement manifests. If a facility receives hazardous waste that is accompanied by a paper replacement manifest for a manifest that was originated electronically, the following procedures apply to the delivery of the hazardous waste by the final transporter:

(1) Upon delivery of the hazardous waste to the designated facility, the owner or operator shall sign and date each copy of the paper replacement manifest by hand in Item 20, Designated Facility Certification of Receipt, and note any discrepancies in Item 18, Discrepancy Indication Space, of the paper replacement manifest,

(2) The owner or operator of the facility shall give back to the final transporter one copy of the paper replacement manifest,

(3) Within 30 days of delivery of the waste to the designated facility, the owner or operator of the facility shall send one signed and dated copy of the paper replacement manifest to the generator, and send an additional signed and dated copy of the paper replacement manifest to the electronic manifest system, and

(4) The owner or operator of the facility shall retain at the facility one copy of the paper replacement manifest for at least three years from the date of delivery.

(i) Special procedures applicable to electronic signature methods undergoing tests. If an owner or operator using an electronic manifest signs this manifest electronically using an electronic signature method which is undergoing pilot or demonstration tests aimed at demonstrating the practicality or legal dependability of the signature method, then the owner or operator shall also sign with an ink signature the facility's certification of receipt or discrepancies on the printed copy of the manifest provided by the transporter. Upon executing its ink signature on this printed copy, the owner or operator shall retain this original copy among its records for at least 3 years from the date of delivery of the waste.

(j) Imposition of user fee for electronic manifest use. An owner or operator who is a user of the electronic manifest format may be assessed a user fee by EPA for the origination or processing of each electronic manifest. An owner or operator may also be assessed a user fee by EPA for the collection and processing of paper manifest copies that owners or operators shall submit to the electronic manifest system operator under Subsection R315-264-71(a)(2)(v). EPA shall maintain and

update from time-to-time the current schedule of electronic manifest system user fees, which shall be determined based on current and projected system costs and level of use of the electronic manifest system. The current schedule of electronic manifest user fees shall be published as an appendix to 40 CFR 262.

(k) Electronic manifest signatures. Electronic manifest signatures shall meet the criteria described in Section R315-262-25.

R315-264-72. Manifest Discrepancies.

(a) Manifest discrepancies are:

(1) Significant differences, as defined by Subsection R315-264-72(b), between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity and type of hazardous waste a facility actually receives;

(2) Rejected wastes, which may be a full or partial shipment of hazardous waste that the treatment, storage, or disposal facility cannot accept; or

(3) Container residues, which are residues that exceed the quantity limits for "empty" containers set forth in Subsection R315-261-7(b).

(b) Significant differences in quantity are: For bulk waste, variations greater than 10 percent in weight; for batch waste, any variation in piece count, such as a discrepancy of one drum in a truckload. Significant differences in type are obvious differences which can be discovered by inspection or waste analysis, such as waste solvent substituted for waste acid, or toxic constituents not reported on the manifest or shipping paper.

(c) Upon discovering a significant difference in quantity or type, the owner or operator shall attempt to reconcile the discrepancy with the waste generator or transporter, e.g., with telephone conversations. If the discrepancy is not resolved within 15 days after receiving the waste, the owner or operator shall immediately submit to the Director a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper at issue.

(d)(1) Upon rejecting waste or identifying a container residue that exceeds the quantity limits for "empty" containers set forth in Subsection R315-261-7(b), the facility shall consult with the generator prior to forwarding the waste to another facility that can manage the waste. If it is impossible to locate an alternative facility that can receive the waste, the facility may return the rejected waste or residue to the generator. The facility shall send the waste to the alternative facility or to the generator within 60 days of the rejection or the container residue identification.

(2) While the facility is making arrangements for forwarding rejected wastes or residues to another facility under Section R315-264-72, it shall ensure that either the delivering transporter retains custody of the waste, or, the facility shall provide for secure, temporary custody of the waste, pending delivery of the waste to the first transporter designated on the manifest prepared under Subsections R315-264-72(e) or (f).

(e) Except as provided in Subsections R315-264-72(e)(7), for full or partial load rejections and residues that are to be sent off-site to an alternate facility, the facility is required to prepare a new manifest in accordance with Subsection R315-262-20(a) and the following instructions:

(1) Write the generator's U.S. EPA ID number in Item 1 of the new manifest. Write the generator's name and mailing address in Item 5 of the new manifest. If the mailing address is different from the generator's site address, then write the generator's site address in the designated space for Item 5.

(2) Write the name of the alternate designated facility and the facility's U.S. EPA ID number in the designated facility block, Item 8, of the new manifest.

(3) Copy the manifest tracking number found in Item 4 of

the old manifest to the Special Handling and Additional Information Block of the new manifest, and indicate that the shipment is a residue or rejected waste from the previous shipment.

(4) Copy the manifest tracking number found in Item 4 of the new manifest to the manifest reference number line in the Discrepancy Block of the old manifest, Item 18a.

(5) Write the DOT description for the rejected load or the residue in Item 9, U.S. DOT Description, of the new manifest and write the container types, quantity, and volume(s) of waste.

(6) Sign the Generator's/Offoror's Certification to certify, as the offeror of the shipment, that the waste has been properly packaged, marked and labeled and is in proper condition for transportation, and mail a signed copy of the manifest to the generator identified in Item 5 of the new manifest.

(7) For full load rejections that are made while the transporter remains present at the facility, the facility may forward the rejected shipment to the alternate facility by completing Item 18b of the original manifest and supplying the information on the next destination facility in the Alternate Facility space. The facility shall retain a copy of this manifest for its records, and then give the remaining copies of the manifest to the transporter to accompany the shipment. If the original manifest is not used, then the facility shall use a new manifest and comply with Subsections R315-264-72(e)(1), (2), (3), (4), (5), and (6).

(f) Except as provided in Subsection R315-264-72(f)(7), for rejected wastes and residues that shall be sent back to the generator, the facility is required to prepare a new manifest in accordance with Subsection R315-262-20(a) and the following instructions:

(1) Write the facility's U.S. EPA ID number in Item 1 of the new manifest. Write the facility's name and mailing address in Item 5 of the new manifest. If the mailing address is different from the facility's site address, then write the facility's site address in the designated space for Item 5 of the new manifest.

(2) Write the name of the initial generator and the generator's U.S. EPA ID number in the designated facility block, Item 8, of the new manifest.

(3) Copy the manifest tracking number found in Item 4 of the old manifest to the Special Handling and Additional Information Block of the new manifest, and indicate that the shipment is a residue or rejected waste from the previous shipment.

(4) Copy the manifest tracking number found in Item 4 of the new manifest to the manifest reference number line in the Discrepancy Block of the old manifest, Item 18a.

(5) Write the DOT description for the rejected load or the residue in Item 9, U.S. DOT Description, of the new manifest and write the container types, quantity, and volume(s) of waste.

(6) Sign the Generator's/Offoror's Certification to certify, as offeror of the shipment, that the waste has been properly packaged, marked and labeled and is in proper condition for transportation.

(7) For full load rejections that are made while the transporter remains at the facility, the facility may return the shipment to the generator with the original manifest by completing Item 18a and 18b of the manifest and supplying the generator's information in the Alternate Facility space. The facility shall retain a copy for its records and then give the remaining copies of the manifest to the transporter to accompany the shipment. If the original manifest is not used, then the facility shall use a new manifest and comply with Subsections R315-264-72(f)(1), (2), (3), (4), (5), (6), and (8).

(8) For full or partial load rejections and container residues contained in non-empty containers that are returned to the generator, the facility shall also comply with the exception reporting requirements in Subsection R315-262-42(a).

(g) If a facility rejects a waste or identifies a container

residue that exceeds the quantity limits for "empty" containers set forth in Subsection R315-261-7(b) after it has signed, dated, and returned a copy of the manifest to the delivering transporter or to the generator, the facility shall amend its copy of the manifest to indicate the rejected wastes or residues in the discrepancy space of the amended manifest. The facility shall also copy the manifest tracking number from Item 4 of the new manifest to the Discrepancy space of the amended manifest, and shall re-sign and date the manifest to certify to the information as amended. The facility shall retain the amended manifest for at least three years from the date of amendment, and shall within 30 days, send a copy of the amended manifest to the transporter and generator that received copies prior to their being amended.

R315-264-73. Operating Record.

(a) The owner or operator shall keep a written operating record at his facility.

(b) The following information shall be recorded, as it becomes available, and maintained in the operating record for three years unless noted as follows:

(1) A description and the quantity of each hazardous waste received, and the method(s) and date(s) of its treatment, storage, or disposal at the facility as required by appendix I of Rule R316-264. This information shall be maintained in the operating record until closure of the facility;

(2) The location of each hazardous waste within the facility and the quantity at each location. For disposal facilities, the location and quantity of each hazardous waste shall be recorded on a map or diagram that shows each cell or disposal area. For all facilities, this information shall include cross-references to manifest document numbers if the waste was accompanied by a manifest. This information shall be maintained in the operating record until closure of the facility. See Section R315-264-119 for related requirements.

(3) Records and results of waste analyses and waste determinations performed as specified in Sections R315-264-13, 17, 314, 341, 1034, 1063, 1083, and 268-7, and Subsection R315-268-4(a).

(4) Summary reports and details of all incidents that require implementing the contingency plan as specified in Subsection R315-264-56(j);

(5) Records and results of inspections as required by Subsection R315-264-15(d), except these data need be kept only three years;

(6) Monitoring, testing or analytical data, and corrective action where required by Sections R315-264-90 through 101, and Sections R315-264-19, 191, 193, 195, 222, 223, 226, 252, 254, 276, 278, 280, 302, 304, 309, 602, 1035, 1064, and 1082 through 1090 and Subsections R315-264-1034(c), 1034(f), 1063(d), and 1063(i). Maintain in the operating record for three years, except for records and results pertaining to ground-water monitoring and cleanup which shall be maintained in the operating record until closure of the facility.

(7) For off-site facilities, notices to generators as specified in Subsection R315-264-12(b); and

(8) All closure cost estimates under Section R315-264-142, and for disposal facilities, all post-closure cost estimates under Section R315-264-144. This information shall be maintained in the operating record until closure of the facility.

(9) A certification by the permittee no less often than annually, that the permittee has a program in place to reduce the volume and toxicity of hazardous waste that he generates to the degree determined by the permittee to be economically practicable; and the proposed method of treatment, storage or disposal is that practicable method currently available to the permittee which minimizes the present and future threat to human health and the environment.

(10) Records of the quantities and date of placement for each shipment of hazardous waste placed in land disposal units

under an extension to the effective date of any land disposal restriction granted pursuant to Section R315-268-5, a petition pursuant to Section R315-268-6, or a certification under R315-268-8, and the applicable notice required by a generator under Subsection R315-268-7(a). This information shall be maintained in the operating record until closure of the facility.

(11) For an off-site treatment facility, a copy of the notice, and the certification and demonstration, if applicable, required by the generator or the owner or operator under Sections R315-268-7 or 8;

(12) For an on-site treatment facility, the information contained in the notice, except the manifest number, and the certification and demonstration if applicable, required by the generator or the owner or operator under Sections R315-268-7 or 8;

(13) For an off-site land disposal facility, a copy of the notice, and the certification and demonstration if applicable, required by the generator or the owner or operator of a treatment facility under Sections R315-268-7 or 8, whichever is applicable; and

(14) For an on-site land disposal facility, the information contained in the notice required by the generator or owner or operator of a treatment facility under Section R315-268-7, except for the manifest number, and the certification and demonstration if applicable, required under Section R315-268-8, whichever is applicable.

(15) For an off-site storage facility, a copy of the notice, and the certification and demonstration if applicable, required by the generator or the owner or operator under Sections R315-268-7 or 8; and

(16) For an on-site storage facility, the information contained in the notice, except the manifest number, and the certification and demonstration if applicable, required by the generator or the owner or operator under Sections R315-268-7 or 8.

(17) Any records required under Subsection R315-264-1(j)(13).

(18) Monitoring, testing or analytical data where required by Section R315-264-347 shall be maintained in the operating record for five years.

(19) Certifications as required by Subsection R315-264-196(f) shall be maintained in the operating record until closure of the facility.

R315-264-74. Availability, Retention, and Disposition of Records.

(a) All records, including plans, required under Rule R315-264 shall be furnished upon request, and made available at all reasonable times for inspection, by any officer, employee, or representative of EPA who is duly designated by the Administrator, or any designated representative of the Director.

(b) The retention period for all records required under Rule R315-264 is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the Director.

(c) A copy of records of waste disposal locations and quantities under Subsection R315-264-73(b)(2) shall be submitted to the Director and local land authority upon closure of the facility.

R315-264-75. Biennial Report.

The owner or operator shall prepare and submit a single copy of a biennial report to the Director by March 1 of each even numbered year. The biennial report shall be submitted on EPA form 8700-13B. The report shall cover facility activities during the previous calendar year and shall include:

(a) The EPA identification number, name, and address of the facility;

(b) The calendar year covered by the report;

(c) For off-site facilities, the EPA identification number of each hazardous waste generator from which the facility received a hazardous waste during the year; for imported shipments, the report shall give the name and address of the foreign generator;

(d) A description and the quantity of each hazardous waste the facility received during the year. For off-site facilities, this information shall be listed by EPA identification number of each generator;

(e) The method of treatment, storage, or disposal for each hazardous waste;

(f) Reserved

(g) The most recent closure cost estimate under Sections R315-264-142, and, for disposal facilities, the most recent post-closure cost estimate under Section R315-264-144; and

(h) For generators who treat, store, or dispose of hazardous waste on-site, a description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated.

(i) For generators who treat, store, or dispose of hazardous waste on-site, a description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for the years prior to 1984.

(j) The certification signed by the owner or operator of the facility or his authorized representative.

R315-264-76. Unmanifested Waste Report.

(a) If a facility accepts for treatment, storage, or disposal any hazardous waste from an off-site source without an accompanying manifest, or without an accompanying shipping paper as described by Subsection R315-263-20(e), and if the waste is not excluded from the manifest requirement by Rules R315-260, through 266, 268, 270, and 273 then the owner or operator shall prepare and submit a letter to the Director within 15 days after receiving the waste. The unmanifested waste report shall contain the following information:

(1) The EPA identification number, name and address of the facility;

(2) The date the facility received the waste;

(3) The EPA identification number, name and address of the generator and the transporter, if available;

(4) A description and the quantity of each unmanifested hazardous waste the facility received;

(5) The method of treatment, storage, or disposal for each hazardous waste;

(6) The certification signed by the owner or operator of the facility or his authorized representative; and,

(7) A brief explanation of why the waste was unmanifested, if known.

R315-264-77. Additional Reports.

In addition to submitting the biennial reports and unmanifested waste reports described in Sections R315-264-75 and 76, the owner or operator shall also report to the Director:

(a) Releases, fires, and explosions as specified in Subsection R315-264-56(j);

(b) Facility closures specified in Section R315-264-115; and

(c) As otherwise required by Sections R315-264-90 through 101, 220 through 232, 250 through 259, 270 through 283, 300 through 317, 1030 through 1049, 1050 through 1079, and 1080 through 1091.

R315-264-90. Releases From Solid Waste Management Units -- Applicability.

(a)(1) Except as provided in Subsection R315-264-90 (b), the regulations in Sections R315-264-90 through 101 apply to owners or operators of facilities that treat, store or dispose of hazardous waste. The owner or operator shall satisfy the

requirements identified in Subsection R315-264-90(a)(2) for all wastes, or constituents thereof, contained in solid waste management units at the facility, regardless of the time at which waste was placed in such units.

(2) All solid waste management units shall comply with the requirements in Section R315-264-101. A surface impoundment, waste pile, and land treatment unit or landfill that receives hazardous waste after July 26, 1982, hereinafter referred to as a "regulated unit", shall comply with the requirements of Sections R315-264-91 through 100 in lieu of Section R315-264-101 for purposes of detecting, characterizing and responding to releases to the uppermost aquifer. The financial responsibility requirements of Section R315-264-101 apply to regulated units.

(3) Groundwater monitoring shall be required at non-land disposal facilities as determined to be necessary and appropriate by the Director.

(b) The owner or operator's regulated unit or units are not subject to regulation for releases into the uppermost aquifer under Sections R315-264-90 through 101 if:

(1) The owner or operator is exempted under Section R315-264-1; or

(2) He operates a unit which the Director finds:

(i) Is an engineered structure,

(ii) Does not receive or contain liquid waste or waste containing free liquids,

(iii) Is designed and operated to exclude liquid, precipitation, and other run-on and run-off,

(iv) Has both inner and outer layers of containment enclosing the waste,

(v) Has a leak detection system built into each containment layer,

(vi) The owner or operator shall provide continuing operation and maintenance of these leak detection systems during the active life of the unit and the closure and post-closure care periods, and

(vii) To a reasonable degree of certainty, will not allow hazardous constituents to migrate beyond the outer containment layer prior to the end of the post-closure care period.

(3) The Director finds, pursuant to Section R315-264-280(d), that the treatment zone of a land treatment unit that qualifies as a regulated unit does not contain levels of hazardous constituents that are above background levels of those constituents by an amount that is statistically significant, and if an unsaturated zone monitoring program meeting the requirements of Section R315-264-278 has not shown a statistically significant increase in hazardous constituents below the treatment zone during the operating life of the unit. An exemption under Subsection R315-264-90(b) can only relieve an owner or operator of responsibility to meet the requirements of Sections R315-264-90 through 101 during the post-closure care period; or

(4) The Director finds that there is no potential for migration of liquid from a regulated unit to the uppermost aquifer during the active life of the regulated unit, including the closure period, and the post-closure care period specified under Section R315-264-117. This demonstration shall be certified by a qualified geologist or geotechnical engineer. In order to provide an adequate margin of safety in the prediction of potential migration of liquid, the owner or operator shall base any predictions made under Subsection R315-264-90(b) on assumptions that maximize the rate of liquid migration.

(5) He designs and operates a pile in compliance with Section R315-264-250(c).

(c) The regulations under Sections R315-264-90 through 101 apply during the active life of the regulated unit, including the closure period. After closure of the regulated unit, the regulations in Sections R315-264-90 through 101:

(1) Do not apply if all waste, waste residues, contaminated

containment system components, and contaminated subsoils are removed or decontaminated at closure;

(2) Apply during the post-closure care period under Section R315-264-117 if the owner or operator is conducting a detection monitoring program under Section R315-264-98; or

(3) Apply during the compliance period under Section R315-264-96 if the owner or operator is conducting a compliance monitoring program under Section R315-264-99 or a corrective action program under Section R315-264-100.

(d) Regulations in Sections R315-264-90 through 101 may apply to miscellaneous units when necessary to comply with Sections R315-264-601 through 603.

(e) The regulations of Sections R315-264-90 through 101 apply to all owners and operators subject to the requirements of Subsection R315-270-1(c)(7), when the Agency issues either a post-closure permit or an enforceable document, as defined in Subsection R315-270-1(c)(7) at the facility. When the Director issues an enforceable document, references in Sections R315-264-90 through 101 to "in the permit" mean "in the enforceable document."

(f) The Director may replace all or part of the requirements of Sections R315-264-91 through 100 applying to a regulated unit with alternative requirements for groundwater monitoring and corrective action for releases to groundwater set out in the permit, or in an enforceable document, as defined in Subsection R315-270-1(c)(7), where the Director determines that:

(1) The regulated unit is situated among solid waste management units, or areas of concern, a release has occurred, and both the regulated unit and one or more solid waste management unit(s), or areas of concern, are likely to have contributed to the release; and

(2) It is not necessary to apply the groundwater monitoring and corrective action requirements of Sections R315-264-91 through 100 because alternative requirements will protect human health and the environment.

R315-264-91. Required Programs.

(a) Owners and operators subject to Sections R315-264-90 through 101 shall conduct a monitoring and response program as follows:

(1) Whenever hazardous constituents under Section R315-264-93 from a regulated unit are detected at a compliance point under Section R315-264-95, the owner or operator shall institute a compliance monitoring program under Section R315-264-99. Detected is defined as statistically significant evidence of contamination as described in Subsection R315-264-98(f);

(2) Whenever the ground-water protection standard under Section R315-264-92 is exceeded, the owner or operator shall institute a corrective action program under Section R315-264-100. Exceeded is defined as statistically significant evidence of increased contamination as described in Subsection R315-264-99(d);

(3) Whenever hazardous constituents under Section R315-264-93 from a regulated unit exceed concentration limits under Section R315-264-94 in ground water between the compliance point under Section R315-264-95 and the downgradient facility property boundary, the owner or operator shall institute a corrective action program under Section R315-264-100; or

(4) In all other cases, the owner or operator shall institute a detection monitoring program under Section R315-264-98.

(b) The Director shall specify in the facility permit the specific elements of the monitoring and response program. The Director may include one or more of the programs identified in Subsection R315-264-91(a) in the facility permit as may be necessary to protect human health and the environment and will specify the circumstances under which each of the programs will be required. In deciding whether to require the owner or operator to be prepared to institute a particular program, the Director shall consider the potential adverse effects on human

health and the environment that might occur before final administrative action on a permit modification application to incorporate such a program could be taken.

R315-264-92. Ground-Water Protection Standard.

The owner or operator shall comply with conditions specified in the facility permit that are designed to ensure that hazardous constituents under Section R315-264-93 detected in the ground water from a regulated unit do not exceed the concentration limits under Section R315-264-94 in the uppermost aquifer underlying the waste management area beyond the point of compliance under Section R315-264-95 during the compliance period under Section R315-264-96. The Director shall establish this ground-water protection standard in the facility permit when hazardous constituents have been detected in the ground water.

R315-264-93. Hazardous Constituents.

(a) The Director shall specify in the facility permit the hazardous constituents to which the ground-water protection standard of Section R315-264-92 applies. Hazardous constituents are constituents identified in appendix VIII of Rule R315-261 that have been detected in ground water in the uppermost aquifer underlying a regulated unit and that are reasonably expected to be in or derived from waste contained in a regulated unit, unless the Director has excluded them under Subsection R315-264-93(b).

(b) The Director shall exclude a Rule R315-261 appendix VIII constituent from the list of hazardous constituents specified in the facility permit if he finds that the constituent is not capable of posing a substantial present or potential hazard to human health or the environment. In deciding whether to grant an exemption, the Director shall consider the following:

(1) Potential adverse effects on ground-water quality, considering:

- (i) The physical and chemical characteristics of the waste in the regulated unit, including its potential for migration;
- (ii) The hydrogeological characteristics of the facility and surrounding land;
- (iii) The quantity of ground water and the direction of ground-water flow;
- (iv) The proximity and withdrawal rates of ground-water users;
- (v) The current and future uses of ground water in the area;
- (vi) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground-water quality;
- (vii) The potential for health risks caused by human exposure to waste constituents;
- (viii) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;
- (ix) The persistence and permanence of the potential adverse effects; and

(2) Potential adverse effects on hydraulically-connected surface water quality, considering:

- (i) The volume and physical and chemical characteristics of the waste in the regulated unit;
- (ii) The hydrogeological characteristics of the facility and surrounding land;
- (iii) The quantity and quality of ground water, and the direction of ground-water flow;
- (iv) The patterns of rainfall in the region;
- (v) The proximity of the regulated unit to surface waters;
- (vi) The current and future uses of surface waters in the area and any water quality standards established for those surface waters;
- (vii) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface-

water quality;

(viii) The potential for health risks caused by human exposure to waste constituents;

(ix) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

(x) The persistence and permanence of the potential adverse effects.

(c) In making any determination under Subsection R315-264-93(b) about the use of ground water in the area around the facility, the Director shall consider any identification of underground sources of drinking water and exempted aquifers made under 40 CFR 144.8.

R315-264-94. Concentration Limits.

(a) The Director shall specify in the facility permit concentration limits in the ground water for hazardous constituents established under Section R315-264-93. The concentration of a hazardous constituent:

(1) Shall not exceed the background level of that constituent in the ground water at the time that limit is specified in the permit; or

(2) For any of the constituents listed in Table 1, shall not exceed the respective value given in that table if the background level of the constituent is below the value given in Table 1; or

Table 1

Maximum Concentration of Constituents for Ground-water Protection

Constituent	Maximum concentration(1)
Arsenic	0.05
Barium	1.0
Cadmium	0.01
Chromium	0.05
Lead	0.05
Mercury	0.002
Selenium	0.01
Silver	0.05
Endrin (1,2,3,4,10,10-hexachloro-1,7-epoxy 1,4,4a,5,6,7,8,9a-octahydro-1, 4-endo, endo-5,8-dimethano naphthalene)	0.0002
Lindane (1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer)	0.004
Methoxychlor (1,1,1-Trichloro-2,2-bis (p-methoxyphenylethane)	0.1
Toxaphene (C10H10Cl6, Technical chlorinated camphene, 67-69 percent chlorine)	0.005
2,4-D (2,4-Dichlorophenoxyacetic acid)	0.1
2,4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic acid)	0.01

(1) Milligrams per liter.

(3) Shall not exceed an alternate limit established by the Director under Subsection R315-264-94(b).

(b) The Director shall establish an alternate concentration limit for a hazardous constituent if he finds that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the alternate concentration limit is not exceeded. In establishing alternate concentration limits, the Director shall consider the following factors:

(1) Potential adverse effects on ground-water quality, considering:

- (i) The physical and chemical characteristics of the waste in the regulated unit, including its potential for migration;
- (ii) The hydrogeological characteristics of the facility and surrounding land;
- (iii) The quantity of ground water and the direction of ground-water flow;
- (iv) The proximity and withdrawal rates of ground-water users;
- (v) The current and future uses of ground water in the

area;

(vi) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground-water quality;

(vii) The potential for health risks caused by human exposure to waste constituents;

(viii) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

(ix) The persistence and permanence of the potential adverse effects; and

(2) Potential adverse effects on hydraulically-connected surface-water quality, considering:

(i) The volume and physical and chemical characteristics of the waste in the regulated unit;

(ii) The hydrogeological characteristics of the facility and surrounding land;

(iii) The quantity and quality of ground water, and the direction of ground-water flow;

(iv) The patterns of rainfall in the region;

(v) The proximity of the regulated unit to surface waters;

(vi) The current and future uses of surface waters in the area and any water quality standards established for those surface waters;

(vii) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality;

(viii) The potential for health risks caused by human exposure to waste constituents;

(ix) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

(x) The persistence and permanence of the potential adverse effects.

(c) In making any determination under Subsection R315-264-94(b) about the use of ground water in the area around the facility the Director shall consider any identification of underground sources of drinking water and exempted aquifers made under 40 CFR 144.7.

R315-264-95. Point of Compliance.

(a) The Director shall specify in the facility permit the point of compliance at which the ground-water protection standard of Section R315-264-92 applies and at which monitoring shall be conducted. The point of compliance is a vertical surface located at the hydraulically downgradient limit of the waste management area that extends down into the uppermost aquifer underlying the regulated units.

(b) The waste management area is the limit projected in the horizontal plane of the area on which waste will be placed during the active life of a regulated unit.

(1) The waste management area includes horizontal space taken up by any liner, dike, or other barrier designed to contain waste in a regulated unit.

(2) If the facility contains more than one regulated unit, the waste management area is described by an imaginary line circumscribing the several regulated units.

R315-264-96. Compliance Period.

(a) The Director shall specify in the facility permit the compliance period during which the ground-water protection standard of Section R315-264-92 applies. The compliance period is the number of years equal to the active life of the waste management area, including any waste management activity prior to permitting, and the closure period.

(b) The compliance period begins when the owner or operator initiates a compliance monitoring program meeting the requirements of Section R315-264-99.

(c) If the owner or operator is engaged in a corrective

action program at the end of the compliance period specified in Subsection R316-264-96(a), the compliance period is extended until the owner or operator can demonstrate that the ground-water protection standard of Section R315-264-92 has not been exceeded for a period of three consecutive years.

R315-264-97. General Ground-Water Monitoring Requirements.

The owner or operator shall comply with the following requirements for any ground-water monitoring program developed to satisfy Sections R315-264-98 through 100:

(a) The ground-water monitoring system shall consist of a sufficient number of wells, installed at appropriate locations and depths to yield ground-water samples from the uppermost aquifer that:

(1) Represent the quality of background ground water that has not been affected by leakage from a regulated unit;

(i) A determination of background ground-water quality may include sampling of wells that are not hydraulically upgradient of the waste management area where:

(A) Hydrogeologic conditions do not allow the owner or operator to determine what wells are hydraulically upgradient; and

(B) Sampling at other wells will provide an indication of background ground-water quality that is representative or more representative than that provided by the upgradient wells; and

(2) Represent the quality of ground water passing the point of compliance.

(3) Allow for the detection of contamination when hazardous waste or hazardous constituents have migrated from the waste management area to the uppermost aquifer.

(b) If a facility contains more than one regulated unit, separate ground-water monitoring systems are not required for each regulated unit provided that provisions for sampling the ground water in the uppermost aquifer will enable detection and measurement at the compliance point of hazardous constituents from the regulated units that have entered the ground water in the uppermost aquifer.

(c) All monitoring wells shall be cased in a manner that maintains the integrity of the monitoring-well bore hole. This casing shall be screened or perforated and packed with gravel or sand, where necessary, to enable collection of ground-water samples. The annular space, i.e., the space between the bore hole and well casing, above the sampling depth shall be sealed to prevent contamination of samples and the ground water.

(d) The ground-water monitoring program shall include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide a reliable indication of ground-water quality below the waste management area. At a minimum the program shall include procedures and techniques for:

(1) Sample collection;

(2) Sample preservation and shipment;

(3) Analytical procedures; and

(4) Chain of custody control.

(e) The ground-water monitoring program shall include sampling and analytical methods that are appropriate for ground-water sampling and that accurately measure hazardous constituents in ground-water samples.

(f) The ground-water monitoring program shall include a determination of the ground-water surface elevation each time ground water is sampled.

(g) In detection monitoring or where appropriate in compliance monitoring, data on each hazardous constituent specified in the permit will be collected from background wells and wells at the compliance point(s). The number and kinds of samples collected to establish background shall be appropriate for the form of statistical test employed, following generally accepted statistical principles. The sample size shall be as large

as necessary to ensure with reasonable confidence that a contaminant release to ground water from a facility will be detected. The owner or operator shall determine an appropriate sampling procedure and interval for each hazardous constituent listed in the facility permit which shall be specified in the unit permit upon approval by the Director. This sampling procedure shall be:

(1) A sequence of at least four samples, taken at an interval that assures, to the greatest extent technically feasible, that an independent sample is obtained, by reference to the uppermost aquifer's effective porosity, hydraulic conductivity, and hydraulic gradient, and the fate and transport characteristics of the potential contaminants, or

(2) an alternate sampling procedure proposed by the owner or operator and approved by the Director.

(h) The owner or operator shall specify one of the following statistical methods to be used in evaluating ground-water monitoring data for each hazardous constituent which, upon approval by the Director, shall be specified in the unit permit. The statistical test chosen shall be conducted separately for each hazardous constituent in each well. Where practical quantification limits (pql's) are used in any of the following statistical procedures to comply with Subsection R315-264-97(i)(5), the pql shall be proposed by the owner or operator and approved by the Director. Use of any of the following statistical methods shall be protective of human health and the environment and shall comply with the performance standards outlined in Subsection R315-264-97(i).

(1) A parametric analysis of variance, ANOVA, followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method shall include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.

(2) An analysis of variance, ANOVA, based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method shall include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.

(3) A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.

(4) A control chart approach that gives control limits for each constituent.

(5) Another statistical test method submitted by the owner or operator and approved by the Director.

(i) Any statistical method chosen under Subsection R315-264-97(h) for specification in the unit permit shall comply with the following performance standards, as appropriate:

(1) The statistical method used to evaluate ground-water monitoring data shall be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.

(2) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a ground-water protection standard, the test shall be done at a Type I error level no less than 0.01 for each testing period. If a multiple comparisons procedure is used, the Type I experimentwise error rate for each testing period shall be no less than 0.05; however, the Type I error of no less than 0.01 for

individual well comparisons shall be maintained. This performance standard does not apply to tolerance intervals, prediction intervals or control charts.

(3) If a control chart approach is used to evaluate ground-water monitoring data, the specific type of control chart and its associated parameter values shall be proposed by the owner or operator and approved by the Director if he or she finds it to be protective of human health and the environment.

(4) If a tolerance interval or a prediction interval is used to evaluate ground-water monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval shall contain, shall be proposed by the owner or operator and approved by the Director if he or she finds these parameters to be protective of human health and the environment. These parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

(5) The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical quantification limit (pql) approved by the Director under Subsection R315-264-97(h) that is used in the statistical method shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.

(6) If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.

(j) Ground-water monitoring data collected in accordance with Subsection R315-264-97(g) including actual levels of constituents shall be maintained in the facility operating record. The Director shall specify in the permit when the data shall be submitted for review.

R315-264-98. Detection Monitoring Program.

An owner or operator required to establish a detection monitoring program under Sections R315-264-90 through 101 shall, at a minimum, discharge the following responsibilities:

(a) The owner or operator shall monitor for indicator parameters, e.g., specific conductance, total organic carbon, or total organic halogen, waste constituents, or reaction products that provide a reliable indication of the presence of hazardous constituents in ground water. The Director shall specify the parameters or constituents to be monitored in the facility permit, after considering the following factors:

(1) The types, quantities, and concentrations of constituents in wastes managed at the regulated unit;

(2) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the waste management area;

(3) The detectability of indicator parameters, waste constituents, and reaction products in ground water; and

(4) The concentrations or values and coefficients of variation of proposed monitoring parameters or constituents in the ground-water background.

(b) The owner or operator shall install a ground-water monitoring system at the compliance point as specified under Section R315-264-95. The ground-water monitoring system shall comply with Subsections R315-264-97(a)(2), (b), and (c).

(c) The owner or operator shall conduct a ground-water monitoring program for each chemical parameter and hazardous constituent specified in the permit pursuant to Subsection R315-264-98(a) in accordance with Section R315-264-97(g). The owner or operator shall maintain a record of ground-water analytical data as measured and in a form necessary for the determination of statistical significance under Subsection R315-264-97(h).

(d) The Director shall specify the frequencies for collecting samples and conducting statistical tests to determine whether there is statistically significant evidence of contamination for any parameter or hazardous constituent specified in the permit conditions under Subsection R315-264-98(a) in accordance with Subsection R315-264-97(g).

(e) The owner or operator shall determine the ground-water flow rate and direction in the uppermost aquifer at least annually.

(f) The owner or operator shall determine whether there is statistically significant evidence of contamination for any chemical parameter of hazardous constituent specified in the permit pursuant to Subsection R315-264-98(a) at a frequency specified under Subsection R315-264-98(d).

(1) In determining whether statistically significant evidence of contamination exists, the owner or operator shall use the method(s) specified in the permit under Subsection R315-264-97(h). These method(s) shall compare data collected at the compliance point(s) to the background ground-water quality data.

(2) The owner or operator shall determine whether there is statistically significant evidence of contamination at each monitoring well as the compliance point within a reasonable period of time after completion of sampling. The Director shall specify in the facility permit what period of time is reasonable, after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of ground-water samples.

(g) If the owner or operator determines pursuant to Subsection R315-264-98(f) that there is statistically significant evidence of contamination for chemical parameters or hazardous constituents specified pursuant to Subsection R315-264-98(a) at any monitoring well at the compliance point, he or she shall:

(1) Notify the Director of this finding in writing within seven days. The notification shall indicate what chemical parameters or hazardous constituents have shown statistically significant evidence of contamination;

(2) Immediately sample the ground water in all monitoring wells and determine whether constituents in the list of appendix IX of Rule R315-264 are present, and if so, in what concentration. However, the Director, on a discretionary basis, may allow sampling for a site-specific subset of constituents from the appendix IX list of Rule R315-264 and other representative/related waste constituents.

(3) For any appendix IX compounds found in the analysis pursuant to Subsection R315-264-98(g)(2), the owner or operator may resample within one month or at an alternative site-specific schedule approved by the Director and repeat the analysis for those compounds detected. If the results of the second analysis confirm the initial results, then these constituents shall form the basis for compliance monitoring. If the owner or operator does not resample for the compounds in Subsection R315-264-98(g)(2), the hazardous constituents found during this initial appendix IX analysis shall form the basis for compliance monitoring.

(4) Within 90 days, submit to the Director an application for a permit modification to establish a compliance monitoring program meeting the requirements of Section R315-264-99. The application shall include the following information:

(i) An identification of the concentration of any appendix IX constituent detected in the ground water at each monitoring well at the compliance point;

(ii) Any proposed changes to the ground-water monitoring system at the facility necessary to meet the requirements of Section R315-264-99;

(iii) Any proposed additions or changes to the monitoring frequency, sampling and analysis procedures or methods, or statistical methods used at the facility necessary to meet the requirements of Section R315-264-99;

(iv) For each hazardous constituent detected at the compliance point, a proposed concentration limit under Subsections R315-264-94(a)(1) or (2), or a notice of intent to seek an alternate concentration limit under Subsection R315-264-94(b); and

(5) Within 180 days, submit to the Director:

(i) All data necessary to justify an alternate concentration limit sought under Subsection R315-264-94(b); and

(ii) An engineering feasibility plan for a corrective action program necessary to meet the requirement of Section R315-264-100, unless:

(A) All hazardous constituents identified under Subsection R315-264-98(g)(2) are listed in Table 1 of Section R315-264-94 and their concentrations do not exceed the respective values given in that Table; or

(B) The owner or operator has sought an alternate concentration limit under Subsection R315-264-94(b) for every hazardous constituent identified under Subsection R315-264-98(g)(2).

(6) If the owner or operator determines, pursuant to Subsection R315-264-98(f), that there is a statistically significant difference for chemical parameters or hazardous constituents specified pursuant to Subsection R315-264-98(a) at any monitoring well at the compliance point, he or she may demonstrate that a source other than a regulated unit caused the contamination or that the detection is an artifact caused by an error in sampling, analysis, or statistical evaluation or natural variation in the ground water. The owner operator may make a demonstration under Subsection R315-264-98(g) in addition to, or in lieu of, submitting a permit modification application under Subsection R315-264-98(g)(4); however, the owner or operator is not relieved of the requirement to submit a permit modification application within the time specified in Subsection R315-264-98(g)(4) unless the demonstration made under Subsection R315-264-98(g) successfully shows that a source other than a regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation. In making a demonstration under Subsection R315-264-98(g), the owner or operator shall:

(i) Notify the Director in writing within seven days of determining statistically significant evidence of contamination at the compliance point that he intends to make a demonstration under Subsection R315-264-98(g);

(ii) Within 90 days, submit a report to the Director which demonstrates that a source other than a regulated unit caused the contamination or that the contamination resulted from error in sampling, analysis, or evaluation;

(iii) Within 90 days, submit to the Director an application for a permit modification to make any appropriate changes to the detection monitoring program facility; and

(iv) Continue to monitor in accordance with the detection monitoring program established under Section R315-264-98.

(h) If the owner or operator determines that the detection monitoring program no longer satisfies the requirements of Section R315-264-98, he or she shall, within 90 days, submit an application for a permit modification to make any appropriate changes to the program.

R315-264-99. Compliance Monitoring Program.

An owner or operator required to establish a compliance monitoring program under Sections R315-264-90 through 101 shall, at a minimum, discharge the following responsibilities:

(a) The owner or operator shall monitor the ground water to determine whether regulated units are in compliance with the ground-water protection standard under Section R315-264-92. The Director shall specify the ground-water protection standard in the facility permit, including:

(1) A list of the hazardous constituents identified under Section R315-264-93;

(2) Concentration limits under Section R315-264-94 for each of those hazardous constituents;

(3) The compliance point under Section R315-264-95; and

(4) The compliance period under Section R315-264-96.

(b) The owner or operator shall install a ground-water monitoring system at the compliance point as specified under Section R315-264-95. The ground-water monitoring system shall comply with Subsections R315-264-97(a)(2), (b), and (c).

(c) The Director shall specify the sampling procedures and statistical methods appropriate for the constituents and the facility, consistent with Subsections R315-264-97(g) and (h).

(1) The owner or operator shall conduct a sampling program for each chemical parameter or hazardous constituent in accordance with Subsection R315-264-97(g).

(2) The owner or operator shall record ground-water analytical data as measured and in form necessary for the determination of statistical significance under Subsection R315-264-97(h) for the compliance period of the facility.

(d) The owner or operator shall determine whether there is statistically significant evidence of increased contamination for any chemical parameter or hazardous constituent specified in the permit, pursuant to Subsection R315-264-99(a), at a frequency specified under Subsection R315-264-99(f).

(1) In determining whether statistically significant evidence of increased contamination exists, the owner or operator shall use the method(s) specified in the permit under Subsection R315-264-97(h). The methods(s) shall compare data collected at the compliance point(s) to a concentration limit developed in accordance with Section R315-264-94.

(2) The owner or operator shall determine whether there is statistically significant evidence of increased contamination at each monitoring well at the compliance point within a reasonable time period after completion of sampling. The Director shall specify that time period in the facility permit, after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of ground-water samples.

(e) The owner or operator shall determine the ground-water flow rate and direction in the uppermost aquifer at least annually.

(f) The Director shall specify the frequencies for collecting samples and conducting statistical tests to determine statistically significant evidence of increased contamination in accordance with Subsection R315-264-97(g).

(g) Annually, the owner or operator shall determine whether additional hazardous constituents from appendix IX of Rule R315-264, which could possibly be present but are not on the detection monitoring list in the permit, are actually present in the uppermost aquifer and, if so, at what concentration, pursuant to procedures in Subsection R315-264-98(f). To accomplish this, the owner or operator shall consult with the Director to determine on a case-by-case basis: which sample collection event during the year will involve enhanced sampling; the number of monitoring wells at the compliance point to undergo enhanced sampling; the number of samples to be collected from each of these monitoring wells; and, the specific constituents from appendix IX of Rule R315-264 for which these samples shall be analyzed. If the enhanced sampling event indicates that appendix IX constituents are present in the ground water that are not already identified in the permit as monitoring constituents, the owner or operator may resample within one month or at an alternative site-specific schedule approved by the Director, and repeat the analysis. If the second analysis confirms the presence of new constituents, the owner or operator shall report the concentration of these additional constituents to the Director within seven days after the completion of the second analysis and add them to the monitoring list. If the owner or operator chooses not to resample, then he or she shall report the concentrations of these additional constituents to the

Director within seven days after completion of the initial analysis, and add them to the monitoring list.

(h) If the owner or operator determines pursuant to Subsection R315-264-99(d) that any concentration limits under Section R315-264-94 are being exceeded at any monitoring well at the point of compliance he or she shall:

(1) Notify the Director of this finding in writing within seven days. The notification shall indicate what concentration limits have been exceeded.

(2) Submit to the Director an application for a permit modification to establish a corrective action program meeting the requirements of Section R315-264-100 within 180 days, or within 90 days if an engineering feasibility study has been previously submitted to the Director under Subsection R315-264-98(g)(5). The application shall at a minimum include the following information:

(i) A detailed description of corrective actions that will achieve compliance with the ground-water protection standard specified in the permit under Subsection R315-264-99(a); and

(ii) A plan for a ground-water monitoring program that will demonstrate the effectiveness of the corrective action. Such a ground-water monitoring program may be based on a compliance monitoring program developed to meet the requirements of Section R315-264-99.

(i) If the owner or operator determines, pursuant to Subsection R315-264-99(d), that the ground-water concentration limits under Section R315-264-99 are being exceeded at any monitoring well at the point of compliance, he or she may demonstrate that a source other than a regulated unit caused the contamination or that the detection is an artifact caused by an error in sampling, analysis, or statistical evaluation or natural variation in the ground water. In making a demonstration under Subsection R315-264-99(h), the owner or operator shall:

(1) Notify the Director in writing within seven days that he intends to make a demonstration under Subsection R315-264-99(h);

(2) Within 90 days, submit a report to the Director which demonstrates that a source other than a regulated unit caused the standard to be exceeded or that the apparent noncompliance with the standards resulted from error in sampling, analysis, or evaluation;

(3) Within 90 days, submit to the Director an application for a permit modification to make any appropriate changes to the compliance monitoring program at the facility; and

(4) Continue to monitor in accord with the compliance monitoring program established under Section R315-264-99.

(j) If the owner or operator determines that the compliance monitoring program no longer satisfies the requirements of Section R315-264-99, he shall, within 90 days, submit an application for a permit modification to make any appropriate changes to the program.

R315-264-100. Corrective Action Program.

An owner or operator required to establish a corrective action program under Sections R315-264-90 through 101 shall, at a minimum, discharge the following responsibilities:

(a) The owner or operator shall take corrective action to ensure that regulated units are in compliance with the ground-water protection standard under Section R315-264-92. The Director shall specify the ground-water protection standard in the facility permit, including:

(1) A list of the hazardous constituents identified under Section R315-264-93;

(2) Concentration limits under Section R315-264-94 for each of those hazardous constituents;

(3) The compliance point under Section R315-264-95; and

(4) The compliance period under Section R315-264-96.

(b) The owner or operator shall implement a corrective

action program that prevents hazardous constituents from exceeding their respective concentration limits at the compliance point by removing the hazardous waste constituents or treating them in place. The permit shall specify the specific measures that will be taken.

(c) The owner or operator shall begin corrective action within a reasonable time period after the ground-water protection standard is exceeded. The Director shall specify that time period in the facility permit. If a facility permit includes a corrective action program in addition to a compliance monitoring program, the permit shall specify when the corrective action will begin and such a requirement will operate in lieu of Subsection R315-264-99(i)(2).

(d) In conjunction with a corrective action program, the owner or operator shall establish and implement a ground-water monitoring program to demonstrate the effectiveness of the corrective action program. Such a monitoring program may be based on the requirements for a compliance monitoring program under Section R315-264-99 and shall be as effective as that program in determining compliance with the ground-water protection standard under Section R315-264-92 and in determining the success of a corrective action program under Subsection R315-264-100(e), where appropriate.

(e) In addition to the other requirements of Section R315-264-100, the owner or operator shall conduct a corrective action program to remove or treat in place any hazardous constituents under Section R315-264-93 that exceed concentration limits under Section R315-264-94 in groundwater:

(1) Between the compliance point under Section R315-264-95 and the downgradient property boundary; and

(2) Beyond the facility boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the Director that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action. The owner/operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis.

(3) Corrective action measures under Subsection R315-264-100(e) shall be initiated and completed within a reasonable period of time considering the extent of contamination.

(4) Corrective action measures under Subsection R315-264-100(e) may be terminated once the concentration of hazardous constituents under Section R315-264-93 is reduced to levels below their respective concentration limits under Section R315-264-94.

(f) The owner or operator shall continue corrective action measures during the compliance period to the extent necessary to ensure that the ground-water protection standard is not exceeded. If the owner or operator is conducting corrective action at the end of the compliance period, he shall continue that corrective action for as long as necessary to achieve compliance with the ground-water protection standard. The owner or operator may terminate corrective action measures taken beyond the period equal to the active life of the waste management area, including the closure period, if he can demonstrate, based on data from the ground-water monitoring program under Subsection R315-264-100(d), that the ground-water protection standard of Section R315-264-92 has not been exceeded for a period of three consecutive years.

(g) The owner or operator shall report in writing to the Director on the effectiveness of the corrective action program. The owner or operator shall submit these reports annually.

(h) If the owner or operator determines that the corrective action program no longer satisfies the requirements Section R315-264-100, he shall, within 90 days, submit an application for a permit modification to make any appropriate changes to the

program.

R315-264-101. Corrective Action for Solid Waste Management Units.

(a) The owner or operator of a facility seeking a permit for the treatment, storage or disposal of hazardous waste shall institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or constituents from any solid waste management unit at the facility, regardless of the time at which waste was placed in such unit.

(b) Corrective action shall be specified in the permit in accordance with Section R315-264-101 and Sections R315-264-550 through 555. The permit shall contain schedules of compliance for such corrective action, where such corrective action cannot be completed prior to issuance of the permit, and assurances of financial responsibility for completing such corrective action.

(c) The owner or operator shall implement corrective actions beyond the facility property boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the Director that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such actions. The owner/operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases shall be determined on a case-by-case basis. Assurances of financial responsibility for such corrective action shall be provided.

(d) Section R315-264-101 does not apply to remediation waste management sites unless they are part of a facility subject to a permit for treating, storing or disposing of hazardous wastes that are not remediation wastes.

R315-264-110. Closure and Post-Closure -- Applicability.

Except as Section R315-264-1 provides otherwise:

(a) Sections R315-264-111 through 115, which concern closure, apply to the owners and operators of all hazardous waste management facilities; and

(b) Sections R315-264-116 through 120, which concern post-closure care, apply to the owners and operators of:

(1) All hazardous waste disposal facilities;

(2) Waste piles and surface impoundments from which the owner or operator intends to remove the wastes at closure to the extent that these sections are made applicable to such facilities in Sections R315-264-228 or 258;

(3) Tank systems that are required under Section R315-264-197 to meet the requirements for landfills; and

(4) Containment buildings that are required under Section R315-264-1102 to meet the requirement for landfills.

(c) The Director may replace all or part of the requirements of Sections R315-264-110 through 120, including the unit-specific standards referenced in Subsection R315-264-111(c) applying to a regulated unit, with alternative requirements set out in a permit or in an enforceable document, as defined in Subsection R315-270-1(c)(7), where the Director determines that:

(1) The regulated unit is situated among solid waste management units, or areas of concern, a release has occurred, and both the regulated unit and one or more solid waste management unit(s), or areas of concern, are likely to have contributed to the release; and

(2) It is not necessary to apply the closure requirements of Sections R315-264-110 through 120, and those referenced herein, because the alternative requirements will protect human health and the environment and will satisfy the closure performance standard of Subsections R315-264-111(a) and (b).

R315-264-111. Closure Performance Standard.

The owner or operator shall close the facility in a manner that:

- (a) Minimizes the need for further maintenance; and
- (b) Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere; and
- (c) Complies with the closure requirements of Rule R315-264, including, but not limited to, the requirements of Sections R315-264-178, 197, 228, 258, 280, 310, 351, 601 through 603, and 1102.

R315-264-112. Closure plan; Amendment of Plan.

(a) Written plan.

(1) The owner or operator of a hazardous waste management facility shall have a written closure plan. In addition, certain surface impoundments and waste piles from which the owner or operator intends to remove or decontaminate the hazardous waste at partial or final closure are required by Subsections R315-264-228(c)(1)(i) and 258(c)(1)(i) to have contingent closure plans. The plan shall be submitted with the permit application, in accordance with Subsection R315-270-14(b)(13), and approved by the Director as part of the permit issuance procedures under Rule R315-124. In accordance with Section R315-270-32, the approved closure plan shall become a condition of any permit.

(2) Plans shall be consistent with Sections R315-264-111 through 115 and the applicable requirements of Sections R315-264-90 through 101, Sections R315-264-178, 197, 228, 258, 280, 310, 351, 601, and 1102. Until final closure is completed and certified in accordance with Section R315-264-115, a copy of the approved plan and all approved revisions shall be furnished to the Director upon request, including requests by mail.

(b) Content of plan. The plan shall identify steps necessary to perform partial and/or final closure of the facility at any point during its active life. The closure plan shall include, at least:

(1) A description of how each hazardous waste management unit at the facility will be closed in accordance with Section R315-264-111;

(2) A description of how final closure of the facility will be conducted in accordance with Section R315-264-111. The description shall identify the maximum extent of the operations which will be unclosed during the active life of the facility; and

(3) An estimate of the maximum inventory of hazardous wastes ever on-site over the active life of the facility and a detailed description of the methods to be used during partial closures and final closure, including, but not limited to, methods for removing, transporting, treating, storing, or disposing of all hazardous wastes, and identification of the type(s) of the off-site hazardous waste management units to be used, if applicable; and

(4) A detailed description of the steps needed to remove or decontaminate all hazardous waste residues and contaminated containment system components, equipment, structures, and soils during partial and final closure, including, but not limited to, procedures for cleaning equipment and removing contaminated soils, methods for sampling and testing surrounding soils, and criteria for determining the extent of decontamination required to satisfy the closure performance standard; and

(5) A detailed description of other activities necessary during the closure period to ensure that all partial closures and final closure satisfy the closure performance standards, including, but not limited to, ground-water monitoring, leachate collection, and run-on and run-off control; and

(6) A schedule for closure of each hazardous waste management unit and for final closure of the facility. The schedule shall include, at a minimum, the total time required to close each hazardous waste management unit and the time required for intervening closure activities which will allow tracking of the progress of partial and final closure. For example, in the case of a landfill unit, estimates of the time required to treat or dispose of all hazardous waste inventory and of the time required to place a final cover shall be included.

(7) For facilities that use trust funds to establish financial assurance under Section R315-264-143 or Section R315-264-145 and that are expected to close prior to the expiration of the permit, an estimate of the expected year of final closure.

(8) For facilities where the Director has applied alternative requirements at a regulated unit under Subsections R315-264-90(f), 264-110(c), and/or Subsection R315-264-140(d), either the alternative requirements applying to the regulated unit, or a reference to the enforceable document containing those alternative requirements.

(c) Amendment of plan. The owner or operator shall submit a written notification of or request for a permit modification to authorize a change in operating plans, facility design, or the approved closure plan in accordance with the applicable procedures in Rules R315-124 and 270. The written notification or request shall include a copy of the amended closure plan for review or approval by the Director.

(1) The owner or operator may submit a written notification or request to the Director for a permit modification to amend the closure plan at any time prior to the notification of partial or final closure of the facility.

(2) The owner or operator shall submit a written notification of or request for a permit modification to authorize a change in the approved closure plan whenever:

(i) Changes in operating plans or facility design affect the closure plan, or

(ii) There is a change in the expected year of closure, if applicable, or

(iii) In conducting partial or final closure activities, unexpected events require a modification of the approved closure plan.

(iv) The owner or operator requests the Director to apply alternative requirements to a regulated unit under Subsections R315-264-90(f), 264-110(c), and/or Subsection R315-264-140(d).

(3) The owner or operator shall submit a written request for a permit modification including a copy of the amended closure plan for approval at least 60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event has occurred which has affected the closure plan. If an unexpected event occurs during the partial or final closure period, the owner or operator shall request a permit modification no later than 30 days after the unexpected event. An owner or operator of a surface impoundment or waste pile that intends to remove all hazardous waste at closure and is not otherwise required to prepare a contingent closure plan under Subsection R315-264-228(c)(1)(i) or Subsection R315-264-258(c)(1)(i), shall submit an amended closure plan to the Director no later than 60 days from the date that the owner or operator or Director determines that the hazardous waste management unit shall be closed as a landfill, subject to the requirements of Section R315-264-310, or no later than 30 days from that date if the determination is made during partial or final closure. The Director shall approve, disapprove, or modify this amended plan in accordance with the procedures in Rules R315-124 and 270. In accordance with Section R315-270-32, the approved closure plan shall become a condition of any permit issued.

(4) The Director may request modifications to the plan under the conditions described in Subsection R315-264-

112(c)(2). The owner or operator shall submit the modified plan within 60 days of the Director's request, or within 30 days if the change in facility conditions occurs during partial or final closure. Any modifications requested by the Director shall be approved in accordance with the procedures in Rules R315-124 and 270.

(d) Notification of partial closure and final closure.

(1) The owner or operator shall notify the Director in writing at least 60 days prior to the date on which he expects to begin closure of a surface impoundment, waste pile, land treatment or landfill unit, or final closure of a facility with such a unit. The owner or operator shall notify the Director in writing at least 45 days prior to the date on which he expects to begin final closure of a facility with only treatment or storage tanks, container storage, or incinerator units to be closed. The owner or operator shall notify the Director in writing at least 45 days prior to the date on which he expects to begin partial or final closure of a boiler or industrial furnace, whichever is earlier.

(2) The date when he "expects to begin closure" shall be either:

(i) No later than 30 days after the date on which any hazardous waste management unit receives the known final volume of hazardous wastes, or if there is a reasonable possibility that the hazardous waste management unit will receive additional hazardous wastes, no later than one year after the date on which the unit received the most recent volume of hazardous wastes. If the owner or operator of a hazardous waste management unit can demonstrate to the Director that the hazardous waste management unit or facility has the capacity to receive additional hazardous wastes and he has taken all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements, the Director may approve an extension to this one-year limit; or

(ii) For units meeting the requirements of Subsection R315-264-113(d), no later than 30 days after the date on which the hazardous waste management unit receives the known final volume of non-hazardous wastes, or if there is a reasonable possibility that the hazardous waste management unit will receive additional non-hazardous wastes, no later than one year after the date on which the unit received the most recent volume of non-hazardous wastes. If the owner or operator can demonstrate to the Director that the hazardous waste management unit has the capacity to receive additional non-hazardous wastes and he has taken, and will continue to take, all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements, the Director may approve an extension to this one-year limit.

(3) If the facility's permit is terminated, or if the facility is otherwise ordered, by judicial decree or final administrative order, to cease receiving hazardous wastes or to close, then the requirements of Subsection R315-264-112(d) do not apply. However, the owner or operator shall close the facility in accordance with the deadlines established in Section R315-264-113.

(e) Removal of wastes and decontamination or dismantling of equipment. Nothing in Section R315-264-112 shall preclude the owner or operator from removing hazardous wastes and decontaminating or dismantling equipment in accordance with the approved partial or final closure plan at any time before or after notification of partial or final closure.

R315-264-113. Closure; Time Allowed for Closure.

(a) Within 90 days after receiving the final volume of hazardous wastes, or the final volume of non-hazardous wastes if the owner or operator complies with all applicable requirements in Subsections R315-264-113(d) and (e), at a hazardous waste management unit or facility, the owner or operator shall treat, remove from the unit or facility, or dispose

of on-site, all hazardous wastes in accordance with the approved closure plan. The Director may approve a longer period if the owner or operator complies with all applicable requirements for requesting a modification to the permit and demonstrates that:

(1)(i) The activities required to comply with R315-264-113 will, of necessity, take longer than 90 days to complete; or

(ii)(A) The hazardous waste management unit or facility has the capacity to receive additional hazardous wastes, or has the capacity to receive non-hazardous wastes if the owner or operator complies with Subsections R315-264-113(d) and (e); and

(B) There is a reasonable likelihood that he or another person will recommence operation of the hazardous waste management unit or the facility within one year; and

(C) Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and

(2) He has taken and will continue to take all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements.

(b) The owner or operator shall complete partial and final closure activities in accordance with the approved closure plan and within 180 days after receiving the final volume of hazardous wastes, or the final volume of non-hazardous wastes if the owner or operator complies with all applicable requirements in Subsections R315-264-113(d) and (e), at the hazardous waste management unit or facility. The Director may approve an extension to the closure period if the owner or operator complies with all applicable requirements for requesting a modification to the permit and demonstrates that:

(1)(i) The partial or final closure activities will, of necessity, take longer than 180 days to complete; or

(ii)(A) The hazardous waste management unit or facility has the capacity to receive additional hazardous wastes, or has the capacity to receive non-hazardous wastes if the owner or operator complies with Subsections R315-264-113(d) and (e); and

(B) There is reasonable likelihood that he or another person will recommence operation of the hazardous waste management unit or the facility within one year; and

(C) Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and

(2) He has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed but not operating hazardous waste management unit or facility, including compliance with all applicable permit requirements.

(c) The demonstrations referred to in Subsections R315-264-113(a)(1) and (b)(1) shall be made as follows:

(1) The demonstrations in Subsection R315-264-113(a)(1) shall be made at least 30 days prior to the expiration of the 90-day period in Subsection R315-264-113(a); and

(2) The demonstration in Subsection R315-264-113(b)(1) shall be made at least 30 days prior to the expiration of the 180-day period in Subsection R315-264-113(b), unless the owner or operator is otherwise subject to the deadlines in Subsection R315-264-113(d).

(d) The Director may allow an owner or operator to receive only non-hazardous wastes in a landfill, land treatment, or surface impoundment unit after the final receipt of hazardous wastes at that unit if:

(1) The owner or operator requests a permit modification in compliance with all applicable requirements in Rules R315-270 and 124 and in the permit modification request demonstrates that:

(i) The unit has the existing design capacity as indicated on the part A application to receive non-hazardous wastes; and

(ii) There is a reasonable likelihood that the owner or

operator or another person will receive non-hazardous wastes in the unit within one year after the final receipt of hazardous wastes; and

(iii) The non-hazardous wastes will not be incompatible with any remaining wastes in the unit, or with the facility design and operating requirements of the unit or facility under Rule R315-264; and

(iv) Closure of the hazardous waste management unit would be incompatible with continued operation of the unit or facility; and

(v) The owner or operator is operating and will continue to operate in compliance with all applicable permit requirements; and

(2) The request to modify the permit includes an amended waste analysis plan, ground-water monitoring and response program, human exposure assessment required under RCRA section 3019, and closure and post-closure plans, and updated cost estimates and demonstrations of financial assurance for closure and post-closure care as necessary and appropriate, to reflect any changes due to the presence of hazardous constituents in the non-hazardous wastes, and changes in closure activities, including the expected year of closure if applicable under Subsection R315-264-112(b)(7), as a result of the receipt of non-hazardous wastes following the final receipt of hazardous wastes; and

(3) The request to modify the permit includes revisions, as necessary and appropriate, to affected conditions of the permit to account for the receipt of non-hazardous wastes following receipt of the final volume of hazardous wastes; and

(4) The request to modify the permit and the demonstrations referred to in Subsections R315-264-113(d)(1) and (d)(2) are submitted to the Director no later than 120 days prior to the date on which the owner or operator of the facility receives the known final volume of hazardous wastes at the unit, or no later than 90 days after the effective date of this rule in the state in which the unit is located, whichever is later.

(e) In addition to the requirements in Subsection R315-264-113(d), an owner or operator of a hazardous waste surface impoundment that is not in compliance with the liner and leachate collection system requirements in Subsection R315-264-221(c) or (d) shall:

(1) Submit with the request to modify the permit:

(i) A contingent corrective measures plan, unless a corrective action plan has already been submitted under Section R315-264-99; and

(ii) A plan for removing hazardous wastes in compliance with Subsection R315-264-113(e)(2); and

(2) Remove all hazardous wastes from the unit by removing all hazardous liquids, and removing all hazardous sludges to the extent practicable without impairing the integrity of the liner(s), if any.

(3) Removal of hazardous wastes shall be completed no later than 90 days after the final receipt of hazardous wastes. The Director may approve an extension to this deadline if the owner or operator demonstrates that the removal of hazardous wastes will, of necessity, take longer than the allotted period to complete and that an extension will not pose a threat to human health and the environment.

(4) If a release that is a statistically significant increase, or decrease in the case of pH, over background values for detection monitoring parameters or constituents specified in the permit or that exceeds the facility's ground-water protection standard at the point of compliance, if applicable, is detected in accordance with the requirements in Sections R315-264-90 through 101, the owner or operator of the unit:

(i) Shall implement corrective measures in accordance with the approved contingent corrective measures plan required by Subsection R315-264-113(e)(1) no later than one year after detection of the release, or approval of the contingent corrective

measures plan, whichever is later;

(ii) May continue to receive wastes at the unit following detection of the release only if the approved corrective measures plan includes a demonstration that continued receipt of wastes will not impede corrective action; and

(iii) May be required by the Director to implement corrective measures in less than one year or to cease the receipt of wastes until corrective measures have been implemented if necessary to protect human health and the environment.

(5) During the period of corrective action, the owner or operator shall provide annual reports to the Director describing the progress of the corrective action program, compile all ground-water monitoring data, and evaluate the effect of the continued receipt of non-hazardous wastes on the effectiveness of the corrective action.

(6) The Director may require the owner or operator to commence closure of the unit if the owner or operator fails to implement corrective action measures in accordance with the approved contingent corrective measures plan within one year as required in Subsection R315-264-113(e)(4), or fails to make substantial progress in implementing corrective action and achieving the facility's ground-water protection standard or background levels if the facility has not yet established a ground-water protection standard.

(7) If the owner or operator fails to implement corrective measures as required in Subsection R315-264-113(e)(4), or if the Director determines that substantial progress has not been made pursuant to Subsection R315-264-113(e)(6) he shall:

(i) Notify the owner or operator in writing that the owner or operator shall begin closure in accordance with the deadlines in Subsections R315-264-113(a) and (b) and provide a detailed statement of reasons for this determination, and

(ii) Provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments on the decision no later than 20 days after the date of the notice.

(iii) If the Director receives no written comments, the decision shall become final five days after the close of the comment period. The Director shall notify the owner or operator that the decision is final, and that a revised closure plan, if necessary, shall be submitted within 15 days of the final notice and that closure shall begin in accordance with the deadlines in Subsections R315-264-113 (a) and (b).

(iv) If the Director receives written comments on the decision, he shall make a final decision within 30 days after the end of the comment period, and provide the owner or operator in writing and the public through a newspaper notice, a detailed statement of reasons for the final decision. If the Director determines that substantial progress has not been made, closure shall be initiated in accordance with the deadlines in Subsections R315-264-113(a) and (b).

(v) The final determinations made by the Director under Subsections R315-264-113(e)(7)(iii) and (iv) are not subject to administrative appeal.

R315-264-114. Disposal or Decontamination of Equipment, Structures and Soils.

During the partial and final closure periods, all contaminated equipment, structures and soils shall be properly disposed of or decontaminated unless otherwise specified in Sections R315-264-197, 228, 258, 280 or 310. By removing any hazardous wastes or hazardous constituents during partial and final closure, the owner or operator may become a generator of hazardous waste and shall handle that waste in accordance with all applicable requirements of Rule R315-262.

R315-264-115. Certification of Closure.

Within 60 days of completion of closure of each hazardous waste surface impoundment, waste pile, land treatment, and landfill unit, and within 60 days of the completion of final

closure, the owner or operator shall submit to the Director, by registered mail, a certification that the hazardous waste management unit or facility, as applicable, has been closed in accordance with the specifications in the approved closure plan. The certification shall be signed by the owner or operator and by a qualified Professional Engineer. Documentation supporting the Professional Engineer's certification shall be furnished to the Director upon request until he releases the owner or operator from the financial assurance requirements for closure under Subsection R315-264-143(i).

R315-264-116. Survey Plat.

No later than the submission of the certification of closure of each hazardous waste disposal unit, the owner or operator shall submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the Director, a survey plat indicating the location and dimensions of landfill cells or other hazardous waste disposal units with respect to permanently surveyed benchmarks. This plat shall be prepared and certified by a professional land surveyor. The plat filed with the local zoning authority, or the authority with jurisdiction over local land use, shall contain a note, prominently displayed, which states the owner's or operator's obligation to restrict disturbance of the hazardous waste disposal unit in accordance with the applicable Sections of R315-264-110 through 120.

R315-264-117. Post-Closure Care and Use of Property.

(a)(1) Post-closure care for each hazardous waste management unit subject to the requirements of Sections R315-264-117 through 120 shall begin after completion of closure of the unit and continue for 30 years after that date and shall consist of at least the following:

(i) Monitoring and reporting in accordance with the requirements of Sections R315-264-90 through 101, 220 through 232, 250 through 254, 256 through 259, 270 through 283, 300 through 317, and 600 through 603; and

(ii) Maintenance and monitoring of waste containment systems in accordance with the requirements of Sections R315-264-90 through 101, 220 through 232, 250 through 254, 256 through 259, 270 through 283, 300 through 317, and 600 through 603.

(2) Any time preceding partial closure of a hazardous waste management unit subject to post-closure care requirements or final closure, or any time during the post-closure period for a particular unit, the Director may, in accordance with the permit modification procedures in Rules R315-124 and 270:

(i) Shorten the post-closure care period applicable to the hazardous waste management unit, or facility, if all disposal units have been closed, if he finds that the reduced period is sufficient to protect human health and the environment, e.g., leachate or ground-water monitoring results, characteristics of the hazardous wastes, application of advanced technology, or alternative disposal, treatment, or re-use techniques indicate that the hazardous waste management unit or facility is secure; or

(ii) Extend the post-closure care period applicable to the hazardous waste management unit or facility if he finds that the extended period is necessary to protect human health and the environment, e.g., leachate or ground-water monitoring results indicate a potential for migration of hazardous wastes at levels which may be harmful to human health and the environment.

(b) The Director may require, at partial and final closure, continuation of any of the security requirements of Section R315-264-14 during part or all of the post-closure period when:

(1) Hazardous wastes may remain exposed after completion of partial or final closure; or

(2) Access by the public or domestic livestock may pose a hazard to human health.

(c) Post-closure use of property on or in which hazardous

wastes remain after partial or final closure shall never be allowed to disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the facility's monitoring systems, unless the Director finds that the disturbance:

(1) Is necessary to the proposed use of the property, and will not increase the potential hazard to human health or the environment; or

(2) Is necessary to reduce a threat to human health or the environment.

(d) All post-closure care activities shall be in accordance with the provisions of the approved post-closure plan as specified in Section R315-264-118.

R315-264-118. Post-Closure Plan; Amendment of Plan.

(a) Written Plan. The owner or operator of a hazardous waste disposal unit shall have a written post-closure plan. In addition, certain surface impoundments and waste piles from which the owner or operator intends to remove or decontaminate the hazardous wastes at partial or final closure are required by Subsections R315-264-228(c)(1)(ii) and 264-258(c)(1)(ii) to have contingent post-closure plans. Owners or operators of surface impoundments and waste piles not otherwise required to prepare contingent post-closure plans under Subsections R315-264-228(c)(1)(ii) and 264-258(c)(1)(ii) shall submit a post-closure plan to the Director within 90 days from the date that the owner or operator or Director determines that the hazardous waste management unit shall be closed as a landfill, subject to the requirements of Sections R315-264-117 through 120. The plan shall be submitted with the permit application, in accordance with Subsection R315-270-14(b)(13), and approved by the Director as part of the permit issuance procedures under Rule R315-124. In accordance with Section R315-270-32, the approved post-closure plan shall become a condition of any RCRA permit issued.

(b) For each hazardous waste management unit subject to the requirements Section R315-264-118, the post-closure plan shall identify the activities that will be carried on after closure of each disposal unit and the frequency of these activities, and include at least:

(1) A description of the planned monitoring activities and frequencies at which they will be performed to comply with Sections R315-264-90 through 101, 220 through 232, 250 through 259, 270 through 283, 300 through 317, and 600 through 603 during the post-closure care period; and

(2) A description of the planned maintenance activities, and frequencies at which they will be performed, to ensure:

(i) The integrity of the cap and final cover or other containment systems in accordance with the requirements of Sections R315-264-90 through 101, 220 through 232, 250 through 259, 270 through 283, 300 through 317, and 600 through 603; and

(ii) The function of the monitoring equipment in accordance with the requirements of Sections R315-264-90 through 101, 220 through 232, 250 through 259, 270 through 283, 300 through 317, and 600 through 603; and

(3) The name, address, and phone number of the person or office to contact about the hazardous waste disposal unit or facility during the post-closure care period.

(4) For facilities where the Director has applied alternative requirements at a regulated unit under Subsections R315-264-90(f), 264-110(c), and/or 264-140(d), either the alternative requirements that apply to the regulated unit, or a reference to the enforceable document containing those requirements.

(c) Until final closure of the facility, a copy of the approved post-closure plan shall be furnished to the Director upon request, including request by mail. After final closure has been certified, the person or office specified in Subsection R315-264-118(b)(3) shall keep the approved post-closure plan

during the remainder of the post-closure period.

(d) Amendment of plan. The owner or operator shall submit a written notification of or request for a permit modification to authorize a change in the approved post-closure plan in accordance with the applicable requirements in Rules R315-124 and 270. The written notification or request shall include a copy of the amended post-closure plan for review or approval by the Director.

(1) The owner or operator may submit a written notification or request to the Director for a permit modification to amend the post-closure plan at any time during the active life of the facility or during the post-closure care period.

(2) The owner or operator shall submit a written notification of or request for a permit modification to authorize a change in the approved post-closure plan whenever:

(i) Changes in operating plans or facility design affect the approved post-closure plan, or

(ii) There is a change in the expected year of final closure, if applicable, or

(iii) Events which occur during the active life of the facility, including partial and final closures, affect the approved post-closure plan.

(iv) The owner or operator requests the Director to apply alternative requirements to a regulated unit under Subsections R315-264-90(f), 264-110(c), and/or 264-140(d).

(3) The owner or operator shall submit a written request for a permit modification at least 60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event has occurred which has affected the post-closure plan. An owner or operator of a surface impoundment or waste pile that intends to remove all hazardous waste at closure and is not otherwise required to submit a contingent post-closure plan under Subsections R315-264-228(c)(1)(ii) 258(c)(1)(ii) shall submit a post-closure plan to the Director no later than 90 days after the date that the owner or operator or Director determines that the hazardous waste management unit shall be closed as a landfill, subject to the requirements of Section R315-264-310. The Director shall approve, disapprove or modify this plan in accordance with the procedures in Rules R315-124 and 270. In accordance with Section R315-270-32, the approved post-closure plan shall become a permit condition.

(4) The Director may request modifications to the plan under the conditions described in Subsection R315-264-118(d)(2). The owner or operator shall submit the modified plan no later than 60 days after the Director's request, or no later than 90 days if the unit is a surface impoundment or waste pile not previously required to prepare a contingent post-closure plan. Any modifications requested by the Director shall be approved, disapproved, or modified in accordance with the procedures in Rules R315-124 and 270.

R315-264-119. Post-Closure Notices.

(a) No later than 60 days after certification of closure of each hazardous waste disposal unit, the owner or operator shall submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the Director a record of the type, location, and quantity of hazardous wastes disposed of within each cell or other disposal unit of the facility. For hazardous wastes disposed of before January 12, 1981, the owner or operator shall identify the type, location, and quantity of the hazardous wastes to the best of his knowledge and in accordance with any records he has kept.

(b) Within 60 days of certification of closure of the first hazardous waste disposal unit and within 60 days of certification of closure of the last hazardous waste disposal unit, the owner or operator shall:

(1) Record, in accordance with State law, a notation on the deed to the facility property-or on some other instrument which

is normally examined during title search-that will in perpetuity notify any potential purchaser of the property that:

(i) The land has been used to manage hazardous wastes; and

(ii) Its use is restricted under Sections R315-264-110 through 120; and

(iii) The survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each cell or other hazardous waste disposal unit of the facility required by Section R315-264-116 and Subsection R315-264-119(a) have been filed with the local zoning authority or the authority with jurisdiction over local land use and with the Director; and

(2) Submit a certification, signed by the owner or operator, that he has recorded the notation specified in Subsection R315-264-119(b)(1), including a copy of the document in which the notation has been placed, to the Director.

(c) If the owner or operator or any subsequent owner or operator of the land upon which a hazardous waste disposal unit is located wishes to remove hazardous wastes and hazardous waste residues, the liner, if any, or contaminated soils, he shall request a modification to the post-closure permit in accordance with the applicable requirements in Rules R315-124 and 270. The owner or operator shall demonstrate that the removal of hazardous wastes will satisfy the criteria of Subsection R315-264-117(c). By removing hazardous waste, the owner or operator may become a generator of hazardous waste and shall manage it in accordance with all applicable requirements of Rules R315-260 through 266, 268, 270, and 273. If he is granted a permit modification or otherwise granted approval to conduct such removal activities, the owner or operator may request that the Director approve either:

(1) The removal of the notation on the deed to the facility property or other instrument normally examined during title search; or

(2) The addition of a notation to the deed or instrument indicating the removal of the hazardous waste.

R315-264-120. Certification of Completion of Post-Closure Care.

No later than 60 days after completion of the established post-closure care period for each hazardous waste disposal unit, the owner or operator shall submit to the Director, by registered mail, a certification that the post-closure care period for the hazardous waste disposal unit was performed in accordance with the specifications in the approved post-closure plan. The certification shall be signed by the owner or operator and a qualified Professional Engineer. Documentation supporting the Professional Engineer's certification shall be furnished to the Director upon request until he releases the owner or operator from the financial assurance requirements for post-closure care under Subsection R315-264-145(i).

R315-264-140. Financial Requirements -- Applicability.

(a) The requirements of Sections R315-264-142, 143, 147 through 151 apply to owners and operators of all hazardous waste facilities, except as provided otherwise in Section R315-264-140 or in Section R315-264-1.

(b) The requirements of Sections R315-264-144 and 145 apply only to owners and operators of:

(1) Disposal facilities;

(2) Piles, and surface impoundments from which the owner or operator intends to remove the wastes at closure, to the extent that these sections are made applicable to such facilities in Sections R315-264-228 and 258;

(3) Tank systems that are required under Section R315-264-197 to meet the requirements for landfills; and

(4) Containment buildings that are required under Section R315-264-1102 to meet the requirements for landfills.

(c) States and the Federal government are exempt from the

requirements of Sections R315-264-140 through 151.

(d) The Director may replace all or part of the requirements of Sections R315-264-140 through 151 applying to a regulated unit with alternative requirements for financial assurance set out in the permit or in an enforceable document, as defined in Subsection R315-270-1(c)(7), where the Director:

(1) Prescribes alternative requirements for the regulated unit under Subsection R315-264-90(f) and/or Subsection R315-264-110(c); and

(2) Determines that it is not necessary to apply the requirements of Sections R315-264-140 through 151 because the alternative financial assurance requirements will protect human health and the environment.

R315-264-141. Definitions of Terms as Used in Sections R315-264-140 through 151.

(a) Closure plan means the plan for closure prepared in accordance with the requirements of Section R315-264-112.

(b) Current closure cost estimate means the most recent of the estimates prepared in accordance with Subsections R315-264-142(a), (b), and (c).

(c) Current post-closure cost estimate means the most recent of the estimates prepared in accordance with Subsection R315-264-144(a), (b), and (c).

(d) Parent corporation means a corporation which directly owns at least 50 percent of the voting stock of the corporation which is the facility owner or operator; the latter corporation is deemed a "subsidiary" of the parent corporation.

(e) Post-closure plan means the plan for post-closure care prepared in accordance with the requirements of Sections R315-264-117 through 120.

(f) The following terms are used in the specifications for the financial tests for closure, post-closure care, and liability coverage. The definitions are intended to assist in the understanding of these regulations and are not intended to limit the meanings of terms in a way that conflicts with generally accepted accounting practices.

Assets means all existing and all probable future economic benefits obtained or controlled by a particular entity.

Current assets means cash or other assets or resources commonly identified as those which are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of the business.

Current liabilities means obligations whose liquidation is reasonably expected to require the use of existing resources properly classifiable as current assets or the creation of other current liabilities.

Current plugging and abandonment cost estimate means the most recent of the estimates prepared in accordance with 40 CFR 144.62(a), (b), and (c).

Independently audited refers to an audit performed by an independent certified public accountant in accordance with generally accepted auditing standards.

Liabilities means probable future sacrifices of economic benefits arising from present obligations to transfer assets or provide services to other entities in the future as a result of past transactions or events.

Net working capital means current assets minus current liabilities.

Net worth means total assets minus total liabilities and is equivalent to owner's equity.

Tangible net worth means the tangible assets that remain after deducting liabilities; such assets would not include intangibles such as goodwill and rights to patents or royalties.

(g) In the liability insurance requirements the terms bodily injury and property damage shall have the meanings given these terms by applicable State law. However, these terms do not include those liabilities which, consistent with standard industry practices, are excluded from coverage in liability policies for

bodily injury and property damage. The Director intends the meanings of other terms used in the liability insurance requirements to be consistent with their common meanings within the insurance industry. The definitions given below of several of the terms are intended to assist in the understanding of these regulations and are not intended to limit their meanings in a way that conflicts with general insurance industry usage.

Accidental occurrence means an accident, including continuous or repeated exposure to conditions, which results in bodily injury or property damage neither expected nor intended from the standpoint of the insured.

Legal defense costs means any expenses that an insurer incurs in defending against claims of third parties brought under the terms and conditions of an insurance policy.

Nonsudden accidental occurrence means an occurrence which takes place over time and involves continuous or repeated exposure.

Sudden accidental occurrence means an occurrence which is not continuous or repeated in nature.

(h) Substantial business relationship means the extent of a business relationship necessary under applicable State law to make a guarantee contract issued incident to that relationship valid and enforceable. A "substantial business relationship" shall arise from a pattern of recent or ongoing business transactions, in addition to the guarantee itself, such that a currently existing business relationship between the guarantor and the owner or operator is demonstrated to the satisfaction of the Director.

R315-264-142. Cost Estimate for Closure.

(a) The owner or operator shall have a detailed written estimate, in current dollars, of the cost of closing the facility in accordance with the requirements in Sections R315-264-111 through 115 and applicable closure requirements in Sections R315-264-178, 197, 228, 258, 280, 310, 351, 601 through 603, and 1102.

(1) The estimate shall equal the cost of final closure at the point in the facility's active life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan, see Subsection R315-264-112(b); and

(2) The closure cost estimate shall be based on the costs to the owner or operator of hiring a third party to close the facility. A third party is a party who is neither a parent nor a subsidiary of the owner or operator. See definition of parent corporation in Subsection R315-264-141(d). The owner or operator may use costs for on-site disposal if he can demonstrate that on-site disposal capacity will exist at all times over the life of the facility.

(3) The closure cost estimate may not incorporate any salvage value that may be realized with the sale of hazardous wastes, or non-hazardous wastes if applicable under Subsection R315-264-113(d), facility structures or equipment, land, or other assets associated with the facility at the time of partial or final closure.

(4) The owner or operator may not incorporate a zero cost for hazardous wastes, or non-hazardous wastes if applicable under Subsection R315-264-113(d), that might have economic value.

(b) During the active life of the facility, the owner or operator shall adjust the closure cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with Section R315-264-143. For owners and operators using the financial test or corporate guarantee, the closure cost estimate shall be updated for inflation within 30 days after the close of the firm's fiscal year and before submission of updated information to the Director as specified in Subsection R315-264-143(f)(3). The adjustment may be made by recalculating the maximum costs of

closure in current dollars, or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its Survey of Current Business, as specified in Subsections R315-264-142(b)(1) and (2). The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year.

(1) The first adjustment is made by multiplying the closure cost estimate by the inflation factor. The result is the adjusted closure cost estimate.

(2) Subsequent adjustments are made by multiplying the latest adjusted closure cost estimate by the latest inflation factor.

(c) During the active life of the facility, the owner or operator shall revise the closure cost estimate no later than 30 days after the Director has approved the request to modify the closure plan, if the change in the closure plan increases the cost of closure. The revised closure cost estimate shall be adjusted for inflation as specified in Subsection R315-264-142(b).

(d) The owner or operator shall keep the following at the facility during the operating life of the facility: The latest closure cost estimate prepared in accordance with Subsection R315-264-142(a) and (c) and, when this estimate has been adjusted in accordance with Subsection R315-264-142(b), the latest adjusted closure cost estimate

R315-264-143. Financial Assurance for Closure.

An owner or operator of each facility shall establish financial assurance for closure of the facility. He shall choose from the options as specified in Subsections R315-264-143(a) through (f).

(a) Closure trust fund.

(1) An owner or operator may satisfy the requirements of Section R315-264-143 by establishing a closure trust fund which conforms to the requirements of Subsection R315-264-143(a) and submitting an originally signed duplicate of the trust agreement to the Director. An owner or operator of a new facility shall submit the originally signed duplicate of the trust agreement to the Director at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The trustee shall be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(2) The wording of the trust agreement shall be identical to the wording specified in Subsection R315-264-151(a)(1), and the trust agreement shall be accompanied by a formal certification of acknowledgment, for example, see Subsection R315-264-151(a)(2). Schedule A of the trust agreement shall be updated within 60 days after a change in the amount of the current closure cost estimate covered by the agreement.

(3) Payments into the trust fund shall be made annually by the owner or operator over the term of the initial RCRA permit or over the remaining operating life of the facility as estimated in the closure plan, whichever period is shorter; this period is hereafter referred to as the "pay-in period." The payments into the closure trust fund shall be made as follows:

(i) For a new facility, the first payment shall be made before the initial receipt of hazardous waste for treatment, storage, or disposal. A receipt from the trustee for this payment shall be submitted by the owner or operator to the Director before this initial receipt of hazardous waste. The first payment shall be at least equal to the current closure cost estimate, except as provided in Subsection R315-264-143(g), divided by the number of years in the pay-in period. Subsequent payments shall be made no later than 30 days after each anniversary date of the first payment. The amount of each subsequent payment shall be determined by this formula:

$$\text{Next Payment} = (\text{CE}-\text{CV})/\text{Y}$$

where CE is the current closure cost estimate, CV is the current value of the trust fund, and Y is the number of years

remaining in the pay-in period.

(ii) If an owner or operator establishes a trust fund as specified in 40 CFR 265.143(a), which is adopted by reference; and the value of that trust fund is less than the current closure cost estimate when a permit is awarded for the facility, the amount of the current closure cost estimate still to be paid into the trust fund shall be paid in over the pay-in period as defined in Subsection R315-264-143(a)(3). Payments shall continue to be made no later than 30 days after each anniversary date of the first payment made pursuant to Rule R315-265. The amount of each payment shall be determined by this formula:

$$\text{Next Payment} = (\text{CE}-\text{CV})/\text{Y}$$

where CE is the current closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

(4) The owner or operator may accelerate payments into the trust fund or he may deposit the full amount of the current closure cost estimate at the time the fund is established. However, he shall maintain the value of the fund at no less than the value that the fund would have if annual payments were made as specified in Subsection R315-264-143(a)(3).

(5) If the owner or operator establishes a closure trust fund after having used one or more alternate mechanisms specified in Section R315-264-143 or in 40 CFR 265.143, which is adopted by reference, his first payment shall be in at least the amount that the fund would contain if the trust fund were established initially and annual payments made according to specifications of Section R315-264-143 and 40 CFR 265.143(a), which is adopted by reference; as applicable.

(6) After the pay-in period is completed, whenever the current closure cost estimate changes, the owner or operator shall compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator, within 60 days after the change in the cost estimate, shall either deposit an amount into the fund so that its value after this deposit at least equals the amount of the current closure cost estimate, or obtain other financial assurance as specified in Section R315-264-143 to cover the difference.

(7) If the value of the trust fund is greater than the total amount of the current closure cost estimate, the owner or operator may submit a written request to the Director for release of the amount in excess of the current closure cost estimate.

(8) If an owner or operator substitutes other financial assurance as specified in Section R315-264-143 for all or part of the trust fund, he may submit a written request to the Director for release of the amount in excess of the current closure cost estimate covered by the trust fund.

(9) Within 60 days after receiving a request from the owner or operator for release of funds as specified in Subsection R315-264-143(a)(7) or (8), the Director shall instruct the trustee to release to the owner or operator such funds as the Director specifies in writing.

(10) After beginning partial or final closure, an owner or operator or another person authorized to conduct partial or final closure may request reimbursements for partial or final closure expenditures by submitting itemized bills to the Director. The owner or operator may request reimbursements for partial closure only if sufficient funds are remaining in the trust fund to cover the maximum costs of closing the facility over its remaining operating life. Within 60 days after receiving bills for partial or final closure activities, the Director shall instruct the trustee to make reimbursements in those amounts as the Director specifies in writing, if the Director determines that the partial or final closure expenditures are in accordance with the approved closure plan, or otherwise justified. If the Director has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly greater than the value of the trust fund, he may withhold reimbursements of such

amounts as he deems prudent until he determines, in accordance with Subsection R315-264-143(i) that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the Director does not instruct the trustee to make such reimbursements, he shall provide the owner or operator with a detailed written statement of reasons.

(11) The Director shall agree to termination of the trust when:

(i) An owner or operator substitutes alternate financial assurance as specified in Section R315-264-143; or

(ii) The Director releases the owner or operator from the requirements of Section R315-264-143 in accordance with Subsection R315-264-143(i).

(b) Surety bond guaranteeing payment into a closure trust fund.

(1) An owner or operator may satisfy the requirements of Section R315-264-143 by obtaining a surety bond which conforms to the requirements of Subsection R315-264-143(b) and submitting the bond to the Director. An owner or operator of a new facility shall submit the bond to the Director at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The bond shall be effective before this initial receipt of hazardous waste. The surety company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

(2) The wording of the surety bond shall be identical to the wording specified in Subsection R315-264-151(b).

(3) The owner or operator who uses a surety bond to satisfy the requirements Section R315-264-143 shall also establish a standby trust fund. Under the terms of the bond, all payments made thereunder shall be deposited by the surety directly into the standby trust fund in accordance with instructions from the Director. This standby trust fund shall meet the requirements specified in Subsection R315-264-143(a), except that:

(i) An originally signed duplicate of the trust agreement shall be submitted to the Director with the surety bond; and

(ii) Until the standby trust fund is funded pursuant to the requirements of Section R315-264-143, the following are not required by these regulations:

(A) Payments into the trust fund as specified in Subsection R315-264-143(a);

(B) Updating of Schedule A of the trust agreement, see Subsection R315-264-151(a), to show current closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The bond shall guarantee that the owner or operator shall:

(i) Fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility; or

(ii) Fund the standby trust fund in an amount equal to the penal sum within 15 days after an administrative order to begin final closure issued by the Director becomes final, or within 15 days after an order to begin final closure is issued by a U.S. district court or other court of competent jurisdiction; or

(iii) Provide alternate financial assurance as specified in Section R315-264-143, and obtain the Director's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and the Director of a notice of cancellation of the bond from the surety.

(5) Under the terms of the bond, the surety shall become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

(6) The penal sum of the bond shall be in an amount at

least equal to the current closure cost estimate, except as provided in Subsection R315-264-143(g).

(7) Whenever the current closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within 60 days after the increase, shall either cause the penal sum to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Director, or obtain other financial assurance as specified in Section R315-264-143 to cover the increase. Whenever the current closure cost estimate decreases, the penal sum may be reduced to the amount of the current closure cost estimate following written approval by the Director.

(8) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Director. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Director, as evidenced by the return receipts.

(9) The owner or operator may cancel the bond if the Director has given prior written consent based on his receipt of evidence of alternate financial assurance as specified in Section R315-264-143.

(c) Surety bond guaranteeing performance of closure.

(1) An owner or operator may satisfy the requirements of Section R315-264-143 by obtaining a surety bond which conforms to the requirements of Subsection R315-264-143(c) and submitting the bond to the Director. An owner or operator of a new facility shall submit the bond to the Director at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The bond shall be effective before this initial receipt of hazardous waste. The surety company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

(2) The wording of the surety bond shall be identical to the wording specified in Subsection R315-264-151(c).

(3) The owner or operator who uses a surety bond to satisfy the requirements Section R315-264-143 shall also establish a standby trust fund. Under the terms of the bond, all payments made thereunder shall be deposited by the surety directly into the standby trust fund in accordance with instructions from the Director. This standby trust shall meet the requirements specified in Subsection R315-264-143(a), except that:

(i) An originally signed duplicate of the trust agreement shall be submitted to the Director with the surety bond; and

(ii) Unless the standby trust fund is funded pursuant to the requirements of Section R315-264-143, the following are not required by Section R315-264-143:

(A) Payments into the trust fund as specified in Subsection R315-264-143(a);

(B) Updating of Schedule A of the trust agreement, see Subsection R315-264-151(a), to show current closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The bond shall guarantee that the owner or operator shall:

(i) Perform final closure in accordance with the closure plan and other requirements of the permit for the facility whenever required to do so; or

(ii) Provide alternate financial assurance as specified in Section R315-264-143, and obtain the Director's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and the Director of a notice of cancellation of the bond from the surety.

(5) Under the terms of the bond, the surety shall become

liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. Following a final administrative determination pursuant to section 3008 of RCRA that the owner or operator has failed to perform final closure in accordance with the approved closure plan and other permit requirements when required to do so, under the terms of the bond the surety shall perform final closure as guaranteed by the bond or shall deposit the amount of the penal sum into the standby trust fund.

(6) The penal sum of the bond shall be in an amount at least equal to the current closure cost estimate.

(7) Whenever the current closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within 60 days after the increase, shall either cause the penal sum to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Director, or obtain other financial assurance as specified in Section R315-264-143. Whenever the current closure cost estimate decreases, the penal sum may be reduced to the amount of the current closure cost estimate following written approval by the Director.

(8) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Director. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Director, as evidenced by the return receipts.

(9) The owner or operator may cancel the bond if the Director has given prior written consent. The Director shall provide such written consent when:

(i) An owner or operator substitutes alternate financial assurance as specified in Section R315-264-143; or

(ii) The Director releases the owner or operator from the requirements of Section R315-264-143 in accordance with Subsection R315-264-143(i).

(10) The surety shall not be liable for deficiencies in the performance of closure by the owner or operator after the Director releases the owner or operator from the requirements of Section R315-264-143 in accordance with Subsection R315-264-143(i).

(d) Closure letter of credit.

(1) An owner or operator may satisfy the requirements of Section R315-264-143 by obtaining an irrevocable standby letter of credit which conforms to the requirements of Subsection R315-264-143(d) and submitting the letter to the Director. An owner or operator of a new facility shall submit the letter of credit to the Director at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The letter of credit shall be effective before this initial receipt of hazardous waste. The issuing institution shall be an entity which has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a Federal or State agency.

(2) The wording of the letter of credit shall be identical to the wording specified in Subsection R315-264-151(d).

(3) An owner or operator who uses a letter of credit to satisfy the requirements of Section R315-264-143 shall also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the Director shall be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the Director. This standby trust fund shall meet the requirements of the trust fund specified in Subsection R315-264-143(a), except that:

(i) An originally signed duplicate of the trust agreement shall be submitted to the Director with the letter of credit; and

(ii) Unless the standby trust fund is funded pursuant to the requirements of Section R315-264-143, the following are not required by Rule R315-264:

(A) Payments into the trust fund as specified in Subsection

R315-264-143(a);

(B) Updating of Schedule A of the trust agreement, see Subsection R315-264-151(a), to show current closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The letter of credit shall be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information: the EPA Identification Number, name, and address of the facility, and the amount of funds assured for closure of the facility by the letter of credit.

(5) The letter of credit shall be irrevocable and issued for a period of at least 1 year. The letter of credit shall provide that the expiration date shall be automatically extended for a period of at least 1 year unless, at least 120 days before the current expiration date, the issuing institution notifies both the owner or operator and the Director by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days shall begin on the date when both the owner or operator and the Director have received the notice, as evidenced by the return receipts.

(6) The letter of credit shall be issued in an amount at least equal to the current closure cost estimate, except as provided in Subsection R315-264-143(g).

(7) Whenever the current closure cost estimate increases to an amount greater than the amount of the credit, the owner or operator, within 60 days after the increase, shall either cause the amount of the credit to be increased so that it at least equals the current closure cost estimate and submit evidence of such increase to the Director, or obtain other financial assurance as specified in Section R315-264-143 to cover the increase. Whenever the current closure cost estimate decreases, the amount of the credit may be reduced to the amount of the current closure cost estimate following written approval by the Director.

(8) Following a final administrative determination pursuant to section 3008 of RCRA that the owner or operator has failed to perform final closure in accordance with the closure plan and other permit requirements when required to do so, the Director may draw on the letter of credit.

(9) If the owner or operator does not establish alternate financial assurance as specified in Section R315-264-143 and obtain written approval of such alternate assurance from the Director within 90 days after receipt by both the owner or operator and the Director of a notice from issuing institution that it has decided not to extend the letter of credit beyond the current expiration date, the Director shall draw on the letter of credit. The Director may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last 30 days of any such extension the Director shall draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in Section R315-264-143 and obtain written approval of such assurance from the Director.

(10) The Director shall return the letter of credit to the issuing institution for termination when:

(i) An owner or operator substitutes alternate financial assurance as specified in Section R315-264-143; or

(ii) The Director releases the owner or operator from the requirements of Section R315-264-143 in accordance with Subsection R315-264-143(i).

(e) Closure insurance.

(1) An owner or operator may satisfy the requirements of Section R315-264-143 by obtaining closure insurance which conforms to the requirements of this Subsection R315-264-143(e) and submitting a certificate of such insurance to the

Director. An owner or operator of a new facility shall submit the certificate of insurance to the Director at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The insurance shall be effective before this initial receipt of hazardous waste. At a minimum, the insurer shall be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

(2) The wording of the certificate of insurance shall be identical to the wording specified in Subsection R315-264-151(e).

(3) The closure insurance policy shall be issued for a face amount at least equal to the current closure cost estimate, except as provided in Subsection R315-264-143(g). The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer shall not change the face amount, although the insurer's future liability shall be lowered by the amount of the payments.

(4) The closure insurance policy shall guarantee that funds shall be available to close the facility whenever final closure occurs. The policy shall also guarantee that once final closure begins, the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the Director, to such party or parties as the Director specifies.

(5) After beginning partial or final closure, an owner or operator or any other person authorized to conduct closure may request reimbursements for closure expenditures by submitting itemized bills to the Director. The owner or operator may request reimbursements for partial closure only if the remaining value of the policy is sufficient to cover the maximum costs of closing the facility over its remaining operating life. Within 60 days after receiving bills for closure activities, the Director shall instruct the insurer to make reimbursements in such amounts as the Director specifies in writing, if the Director determines that the partial or final closure expenditures are in accordance with the approved closure plan or otherwise justified. If the Director has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly greater than the face amount of the policy, he may withhold reimbursements of such amounts as he deems prudent until he determines, in accordance with Subsection R315-264-143(i), that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the Director does not instruct the insurer to make such reimbursements, he shall provide the owner or operator with a detailed written statement of reasons.

(6) The owner or operator shall maintain the policy in full force and effect until the Director consents to termination of the policy by the owner or operator as specified in Subsection R315-264-143(e)(10). Failure to pay the premium, without substitution of alternate financial assurance as specified in Section R315-264-143, shall constitute a significant violation of these regulations, warranting such remedy as the Director deems necessary. Such violation shall be deemed to begin upon receipt by the Director of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration.

(7) Each policy shall contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.

(8) The policy shall provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy shall, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the Director. Cancellation, termination,

or failure to renew may not occur, however, during the 120 days beginning with the date of receipt of the notice by both the Director and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy shall remain in full force and effect in the event that on or before the date of expiration:

(i) The Director deems the facility abandoned; or
(ii) The permit is terminated or revoked or a new permit is denied; or

(iii) Closure is ordered by the Director or a U.S. district court or other court of competent jurisdiction; or

(iv) The owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or

(v) The premium due is paid.

(9) Whenever the current closure cost estimate increases to an amount greater than the face amount of the policy, the owner or operator, within 60 days after the increase, shall either cause the face amount to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Director, or obtain other financial assurance as specified in Section R315-264-143 to cover the increase. Whenever the current closure cost estimate decreases, the face amount may be reduced to the amount of the current closure cost estimate following written approval by the Director.

(10) The Director shall give written consent to the owner or operator that he may terminate the insurance policy when:

(i) An owner or operator substitutes alternate financial assurance as specified in Section R315-264-143; or

(ii) The Director releases the owner or operator from the requirements of Section R315-264-143 in accordance with Subsection R315-264-143(i).

(f) Financial test and corporate guarantee for closure.

(1) An owner or operator may satisfy the requirements of Section R315-264-143 by demonstrating that he passes a financial test as specified in Subsection R315-264-143(f). To pass this test the owner or operator shall meet the criteria of either Subsections R315-264-143(f)(1)(i) or (ii):

(i) The owner or operator shall have:

(A) Two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and

(B) Net working capital and tangible net worth each at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least \$10 million; and

(D) Assets located in the United States amounting to at least 90 percent of total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(ii) The owner or operator shall have:

(A) A current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's; and

(B) Tangible net worth at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least \$10 million; and

(D) Assets located in the United States amounting to at least 90 percent of total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(2) The phrase "current closure and post-closure cost estimates" as used in Subsection R315-264-143(f)(1) refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer,

Subsection R315-264-151(f). The phrase "current plugging and abandonment cost estimates" as used in Subsection R315-264-143(f)(1) refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer, 40 CFR 144.70(f).

(3) To demonstrate that he meets this test, the owner or operator shall submit the following items to the Director:

(i) A letter signed by the owner's or operator's chief financial officer and worded as specified in Subsection R315-264-151(f); and

(ii) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

(iii) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

(A) He has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

(B) In connection with that procedure, no matters came to his attention which caused him to believe that the specified data should be adjusted.

(4) An owner or operator of a new facility shall submit the items specified in Subsection R315-264-143(f)(3) to the Director at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal.

(5) After the initial submission of items specified in Subsection R315-264-143(f)(3), the owner or operator shall send updated information to the Director within 90 days after the close of each succeeding fiscal year. This information shall consist of all three items specified in Subsection R315-264-143(f)(3).

(6) If the owner or operator no longer meets the requirements of Subsection R315-264-143(f)(1), he shall send notice to the Director of intent to establish alternate financial assurance as specified in Section R315-264-143. The notice shall be sent by certified mail within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator shall provide the alternate financial assurance within 120 days after the end of such fiscal year.

(7) The Director may, based on a reasonable belief that the owner or operator may no longer meet the requirements of Subsection R315-264-143(f)(1), require reports of financial condition at any time from the owner or operator in addition to those specified in Subsection R315-264-143(f)(3). If the Director finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of Subsection R315-264-143(f)(1), the owner or operator shall provide alternate financial assurance as specified in Section R315-264-143 within 30 days after notification of such a finding.

(8) The Director may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements, see Subsection R315-264-143(f)(3)(ii). An adverse opinion or a disclaimer of opinion shall be cause for disallowance. The Director shall evaluate other qualifications on an individual basis. The owner or operator shall provide alternate financial assurance as specified in Section R315-264-143 within 30 days after notification of the disallowance.

(9) The owner or operator is no longer required to submit the items specified in Subsection R315-264-143(f)(3) when:

(i) An owner or operator substitutes alternate financial assurance as specified in Section R315-264-143; or

(ii) The Director releases the owner or operator from the

requirements of Section R315-264-143 in accordance with Subsection R315-264-143(i).

(10) An owner or operator may meet the requirements of Section R315-264-143 by obtaining a written guarantee. The guarantor shall be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor shall meet the requirements for owners or operators in Subsection R315-264-143(f)(1) through (8) and shall comply with the terms of the guarantee. The wording of the guarantee shall be identical to the wording specified in Subsection R315-264-151(h). The certified copy of the guarantee shall accompany the items sent to the Director as specified in Subsection R315-264-143(f)(3). One of these items shall be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter shall describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter shall describe this "substantial business relationship" and the value received in consideration of the guarantee. The terms of the guarantee shall provide that:

(i) If the owner or operator fails to perform final closure of a facility covered by the corporate guarantee in accordance with the closure plan and other permit requirements whenever required to do so, the guarantor shall do so or establish a trust fund as specified in Subsection R315-264-143(a) in the name of the owner or operator.

(ii) The corporate guarantee shall remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the Director. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Director, as evidenced by the return receipts.

(iii) If the owner or operator fails to provide alternate financial assurance as specified in Section R315-264-143 and obtain the written approval of such alternate assurance from the Director within 90 days after receipt by both the owner or operator and the Director of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor shall provide such alternate financial assurance in the name of the owner or operator.

(g) Use of multiple financial mechanisms. An owner or operator may satisfy the requirements of Section R315-264-143 by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, and insurance. The mechanisms shall be as specified in Subsections R315-264-143(a), (b), (d), and (e), respectively, except that it is the combination of mechanisms, rather than the single mechanism, which shall provide financial assurance for an amount at least equal to the current closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, he may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The Director may use any or all of the mechanisms to provide for closure of the facility.

(h) Use of a financial mechanism for multiple facilities. An owner or operator may use a financial assurance mechanism specified in Section R315-264-143 to meet the requirements of Section R315-264-143 for more than one facility. Evidence of financial assurance submitted to the Director shall include a list showing, for each facility, the EPA Identification Number, name, address, and the amount of funds for closure assured by the mechanism. If the facilities covered by the mechanism are in more than one State, identical evidence of financial assurance shall be submitted to and maintained with the State Agency

regulating hazardous waste in states other than Utah or with the appropriate Regional Administrator if the facility is located in an unauthorized State. The amount of funds available through the mechanism shall be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for closure of any of the facilities covered by the mechanism, the Director may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

(i) Release of the owner or operator from the requirements of Section R315-264-143. Within 60 days after receiving certifications from the owner or operator and a qualified Professional Engineer that final closure has been completed in accordance with the approved closure plan, the Director shall notify the owner or operator in writing that he is no longer required by Section R315-264-143 to maintain financial assurance for final closure of the facility, unless the Director has reason to believe that final closure has not been in accordance with the approved closure plan. The Director shall provide the owner or operator a detailed written statement of any such reason to believe that closure has not been in accordance with the approved closure plan.

R315-264-144. Cost Estimate for Post-Closure Care.

(a) The owner or operator of a disposal surface impoundment, disposal miscellaneous unit, land treatment unit, or landfill unit, or of a surface impoundment or waste pile required under Sections R315-264-228 and 258 to prepare a contingent closure and post-closure plan, shall have a detailed written estimate, in current dollars, of the annual cost of post-closure monitoring and maintenance of the facility in accordance with the applicable post-closure regulations in Sections R315-264-117 through 120, 228, 258, 280, 310, and 603.

(1) The post-closure cost estimate shall be based on the costs to the owner or operator of hiring a third party to conduct post-closure care activities. A third party is a party who is neither a parent nor a subsidiary of the owner or operator. See definition of parent corporation in Subsection R315-264-141(d).

(2) The post-closure cost estimate is calculated by multiplying the annual post-closure cost estimate by the number of years of post-closure care required under Section R315-264-117.

(b) During the active life of the facility, the owner or operator shall adjust the post-closure cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with Section R315-264-145. For owners or operators using the financial test or corporate guarantee, the post-closure cost estimate shall be updated for inflation within 30 days after the close of the firm's fiscal year and before the submission of updated information to the Director as specified in Subsection R315-264-145(f)(5). The adjustment may be made by recalculating the post-closure cost estimate in current dollars or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its Survey of Current Business as specified in Subsections R315-264-145(b)(1) and (2). The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year.

(1) The first adjustment is made by multiplying the post-closure cost estimate by the inflation factor. The result is the adjusted post-closure cost estimate.

(2) Subsequent adjustments are made by multiplying the latest adjusted post-closure cost estimate by the latest inflation factor.

(c) During the active life of the facility, the owner or operator shall revise the post-closure cost estimate within 30

days after the Director has approved the request to modify the post-closure plan, if the change in the post-closure plan increases the cost of post-closure care. The revised post-closure cost estimate shall be adjusted for inflation as specified in Subsection R315-264-144(b).

(d) The owner or operator shall keep the following at the facility during the operating life of the facility: The latest post-closure cost estimate prepared in accordance with Subsection R315-264-144(a) and (c) and, when this estimate has been adjusted in accordance with Subsection R315-264-144(b), the latest adjusted post-closure cost estimate.

R315-264-145. Financial Assurance for Post-Closure Care.

The owner or operator of a hazardous waste management unit subject to the requirements of Section R315-264-144 shall establish financial assurance for post-closure care in accordance with the approved post-closure plan for the facility 60 days prior to the initial receipt of hazardous waste or the effective date of the regulation, whichever is later. He shall choose from the following options:

(a) Post-closure trust fund.

(1) An owner or operator may satisfy the requirements of Section R315-264-144 by establishing a post-closure trust fund which conforms to the requirements of Subsection R315-264-145(a) and submitting an originally signed duplicate of the trust agreement to the Director. An owner or operator of a new facility shall submit the originally signed duplicate of the trust agreement to the Director at least 60 days before the date on which hazardous waste is first received for disposal. The trustee shall be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(2) The wording of the trust agreement shall be identical to the wording specified in Subsection R315-264-151(a)(1), and the trust agreement shall be accompanied by a formal certification of acknowledgment, for example, see Subsection R315-264-151(a)(2). Schedule A of the trust agreement shall be updated within 60 days after a change in the amount of the current post-closure cost estimate covered by the agreement.

(3) Payments into the trust fund shall be made annually by the owner or operator over the term of the initial RCRA permit or over the remaining operating life of the facility as estimated in the closure plan, whichever period is shorter; this period is hereafter referred to as the "pay-in period." The payments into the post-closure trust fund shall be made as follows:

(i) For a new facility, the first payment shall be made before the initial receipt of hazardous waste for disposal. A receipt from the trustee for this payment shall be submitted by the owner or operator to the Director before this initial receipt of hazardous waste. The first payment shall be at least equal to the current post-closure cost estimate, except as provided in Subsection R315-264-145(g), divided by the number of years in the pay-in period. Subsequent payments shall be made no later than 30 days after each anniversary date of the first payment. The amount of each subsequent payment shall be determined by this formula:

$$\text{Next payment} = (\text{CE} - \text{CV}) / \text{Y}$$

where CE is the current post-closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

(ii) If an owner or operator establishes a trust fund as specified in 40 CFR 265.145(a); which is adopted by reference, and the value of that trust fund is less than the current post-closure cost estimate when a permit is awarded for the facility, the amount of the current post-closure cost estimate still to be paid into the fund shall be paid in over the pay-in period as defined in Subsection R315-264-145(a)(3). Payments shall continue to be made no later than 30 days after each anniversary date of the first payment made pursuant to R315-265. The

amount of each payment shall be determined by this formula:

$$\text{Next payment} = (\text{CE} - \text{CV}) / \text{Y}$$

where CE is the current post-closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

(4) The owner or operator may accelerate payments into the trust fund or he may deposit the full amount of the current post-closure cost estimate at the time the fund is established. However, he shall maintain the value of the fund at no less than the value that the fund would have if annual payments were made as specified in Subsection R315-264-145(a)(3).

(5) If the owner or operator establishes a post-closure trust fund after having used one or more alternate mechanisms specified in Section R315-264-145 or in 40 CFR 265.145, which is adopted by reference; his first payment shall be in at least the amount that the fund would contain if the trust fund were established initially and annual payments made according to specifications of Subsection R315-264-145(a) and 40 CFR 265.145(a), which is adopted by reference; as applicable.

(6) After the pay-in period is completed, whenever the current post-closure cost estimate changes during the operating life of the facility, the owner or operator shall compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator, within 60 days after the change in the cost estimate, shall either deposit an amount into the fund so that its value after this deposit at least equals the amount of the current post-closure cost estimate, or obtain other financial assurance as specified in Section R315-264-145 to cover the difference.

(7) During the operating life of the facility, if the value of the trust fund is greater than the total amount of the current post-closure cost estimate, the owner or operator may submit a written request to the Director for release of the amount in excess of the current post-closure cost estimate.

(8) If an owner or operator substitutes other financial assurance as specified in Section R315-264-145 for all or part of the trust fund, he may submit a written request to the Director for release of the amount in excess of the current post-closure cost estimate covered by the trust fund.

(9) Within 60 days after receiving a request from the owner or operator for release of funds as specified in Subsection R315-264-145(a)(7) or (8), the Director shall instruct the trustee to release to the owner or operator such funds as the Director specifies in writing.

(10) During the period of post-closure care, the Director may approve a release of funds if the owner or operator demonstrates to the Director that the value of the trust fund exceeds the remaining cost of post-closure care.

(11) An owner or operator or any other person authorized to conduct post-closure care may request reimbursements for post-closure care expenditures by submitting itemized bills to the Director. Within 60 days after receiving bills for post-closure care activities, the Director shall instruct the trustee to make reimbursements in those amounts as the Director specifies in writing, if the Director determines that the post-closure care expenditures are in accordance with the approved post-closure plan or otherwise justified. If the Director does not instruct the trustee to make such reimbursements, he shall provide the owner or operator with a detailed written statement of reasons.

(12) The Director shall agree to termination of the trust when:

(i) An owner or operator substitutes alternate financial assurance as specified in Section R315-264-145; or

(ii) The Director releases the owner or operator from the requirements of Section R315-264-145 in accordance with Subsection R315-264-145(i).

(b) Surety bond guaranteeing payment into a post-closure trust fund.

(1) An owner or operator may satisfy the requirements of Section R315-264-145 by obtaining a surety bond which conforms to the requirements of Subsection R315-264-145(b) and submitting the bond to the Director. An owner or operator of a new facility shall submit the bond to the Director at least 60 days before the date on which hazardous waste is first received for disposal. The bond shall be effective before this initial receipt of hazardous waste. The surety company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

(2) The wording of the surety bond shall be identical to the wording specified in Subsection R315-264-151(b).

(3) The owner or operator who uses a surety bond to satisfy the requirements Section R315-264-145 shall also establish a standby trust fund. Under the terms of the bond, all payments made thereunder shall be deposited by the surety directly into the standby trust fund in accordance with instructions from the Director. This standby trust fund shall meet the requirements specified in Subsection R315-264-145(a), except that:

(i) An originally signed duplicate of the trust agreement shall be submitted to the Director with the surety bond; and

(ii) Until the standby trust fund is funded pursuant to the requirements Section R315-264-145, the following are not required by these regulations:

(A) Payments into the trust fund as specified in Subsection R315-264-145(a);

(B) Updating of Schedule A of the trust agreement, see Subsection R315-264-151(a), to show current post-closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The bond shall guarantee that the owner or operator shall:

(i) Fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility; or

(ii) Fund the standby trust fund in an amount equal to the penal sum within 15 days after an administrative order to begin final closure issued by the Director becomes final, or within 15 days after an order to begin final closure is issued by a U.S. district court or other court of competent jurisdiction; or

(iii) Provide alternate financial assurance as specified in Section R315-264-145, and obtain the Director's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and the Director of a notice of cancellation of the bond from the surety.

(5) Under the terms of the bond, the surety shall become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

(6) The penal sum of the bond shall be in an amount at least equal to the current post-closure cost estimate, except as provided in Subsection R315-264-145(g).

(7) Whenever the current post-closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within 60 days after the increase, shall either cause the penal sum to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the Director, or obtain other financial assurance as specified in Section R315-264-145 to cover the increase. Whenever the current post-closure cost estimate decreases, the penal sum may be reduced to the amount of the current post-closure cost estimate following written approval by the Director.

(8) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Director. Cancellation may not

occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Director, as evidenced by the return receipts.

(9) The owner or operator may cancel the bond if the Director has given prior written consent based on his receipt of evidence of alternate financial assurance as specified in Section R315-264-145.

(c) Surety bond guaranteeing performance of post-closure care.

(1) An owner or operator may satisfy the requirements of Section R315-264-145 by obtaining a surety bond which conforms to the requirements of Subsection R315-264-145(c) and submitting the bond to the Director. An owner or operator of a new facility shall submit the bond to the Director at least 60 days before the date on which hazardous waste is first received for disposal. The bond shall be effective before this initial receipt of hazardous waste. The surety company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

(2) The wording of the surety bond shall be identical to the wording specified in Subsection R315-264-151(c).

(3) The owner or operator who uses a surety bond to satisfy the requirements of Section R315-264-145 shall also establish a standby trust fund. Under the terms of the bond, all payments made thereunder shall be deposited by the surety directly into the standby trust fund in accordance with instructions from the Director. This standby trust fund shall meet the requirements specified in Subsection R315-264-145(a), except that:

(i) An originally signed duplicate of the trust agreement shall be submitted to the Director with the surety bond; and

(ii) Unless the standby trust fund is funded pursuant to the requirements of Section R315-264-145, the following are not required by these regulations:

(A) Payments into the trust fund as specified in Subsection R315-264-145(a);

(B) Updating of Schedule A of the trust agreement, see Subsection R315-264-151(a), to show current post-closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The bond shall guarantee that the owner or operator shall:

(i) Perform post-closure care in accordance with the post-closure plan and other requirements of the permit for the facility; or

(ii) Provide alternate financial assurance as specified in Section R315-264-145, and obtain the Director's written approval of the assurance provided, within 90 days of receipt by both the owner or operator and the Director of a notice of cancellation of the bond from the surety.

(5) Under the terms of the bond, the surety shall become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. Following a final administrative determination pursuant to section 3008 of RCRA that the owner or operator has failed to perform post-closure care in accordance with the approved post-closure plan and other permit requirements, under the terms of the bond the surety shall perform post-closure care in accordance with the post-closure plan and other permit requirements or shall deposit the amount of the penal sum into the standby trust fund.

(6) The penal sum of the bond shall be in an amount at least equal to the current post-closure cost estimate.

(7) Whenever the current post-closure cost estimate increases to an amount greater than the penal sum during the operating life of the facility, the owner or operator, within 60

days after the increase, shall either cause the penal sum to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the Director, or obtain other financial assurance as specified in Section R315-264-145. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the penal sum may be reduced to the amount of the current post-closure cost estimate following written approval by the Director.

(8) During the period of post-closure care, the Director may approve a decrease in the penal sum if the owner or operator demonstrates to the Director that the amount exceeds the remaining cost of post-closure care.

(9) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Director. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Director, as evidenced by the return receipts.

(10) The owner or operator may cancel the bond if the Director has given prior written consent. The Director shall provide such written consent when:

(i) An owner or operator substitutes alternate financial assurance as specified in Section R315-264-145; or

(ii) The Director releases the owner or operator from the requirements of Section R315-264-145 in accordance with Subsection R315-264-145(i).

(11) The surety shall not be liable for deficiencies in the performance of post-closure care by the owner or operator after the Director releases the owner or operator from the requirements of Section R315-264-145 in accordance with Subsection R315-264-145(i).

(d) Post-closure letter of credit.

(1) An owner or operator may satisfy the requirements of Section R315-264-145 by obtaining an irrevocable standby letter of credit which conforms to the requirements of Subsection R315-264-145(d) and submitting the letter to the Director. An owner or operator of a new facility shall submit the letter of credit to the Director at least 60 days before the date on which hazardous waste is first received for disposal. The letter of credit shall be effective before this initial receipt of hazardous waste. The issuing institution shall be an entity which has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a Federal or State agency.

(2) The wording of the letter of credit shall be identical to the wording specified in Subsection R315-264-151(d).

(3) An owner or operator who uses a letter of credit to satisfy the requirements of Section R315-264-145 shall also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the Director shall be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the Director. This standby trust fund shall meet the requirements of the trust fund specified in Subsection R315-264-145(a), except that:

(i) An originally signed duplicate of the trust agreement shall be submitted to the Director with the letter of credit; and

(ii) Unless the standby trust fund is funded pursuant to the requirements of Section R315-264-145, the following are not required by these regulations:

(A) Payments into the trust fund as specified in Subsection R315-264-145(a);

(B) Updating of Schedule A of the trust agreement, see Subsection R315-264-151(a), to show current post-closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The letter of credit shall be accompanied by a letter

from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information: the EPA Identification Number, name, and address of the facility, and the amount of funds assured for post-closure care of the facility by the letter of credit.

(5) The letter of credit shall be irrevocable and issued for a period of at least 1 year. The letter of credit shall provide that the expiration date shall be automatically extended for a period of at least 1 year unless, at least 120 days before the current expiration date, the issuing institution notifies both the owner or operator and the Director by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days shall begin on the date when both the owner or operator and the Director have received the notice, as evidenced by the return receipts.

(6) The letter of credit shall be issued in an amount at least equal to the current post-closure cost estimate, except as provided in Subsection R315-264-145(g).

(7) Whenever the current post-closure cost estimate increases to an amount greater than the amount of the credit during the operating life of the facility, the owner or operator, within 60 days after the increase, shall either cause the amount of the credit to be increased so that it at least equals the current post-closure cost estimate and submit evidence of such increase to the Director, or obtain other financial assurance as specified in Section R315-264-145 to cover the increase. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the amount of the credit may be reduced to the amount of the current post-closure cost estimate following written approval by the Director.

(8) During the period of post-closure care, the Director may approve a decrease in the amount of the letter of credit if the owner or operator demonstrates to the Director that the amount exceeds the remaining cost of post-closure care.

(9) Following a final administrative determination pursuant to section 3008 of RCRA that the owner or operator has failed to perform post-closure care in accordance with the approved post-closure plan and other permit requirements, the Director may draw on the letter of credit.

(10) If the owner or operator does not establish alternate financial assurance as specified in Section R315-264-145 and obtain written approval of such alternate assurance from the Director within 90 days after receipt by both the owner or operator and the Director of a notice from the issuing institution that it has decided not to extend the letter of credit beyond the current expiration date, the Director shall draw on the letter of credit. The Director may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last 30 days of any such extension the Director shall draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in Section R315-264-145 and obtain written approval of such assurance from the Director.

(11) The Director shall return the letter of credit to the issuing institution for termination when:

(i) An owner or operator substitutes alternate financial assurance as specified in Section R315-264-145; or

(ii) The Director releases the owner or operator from the requirements of Section R315-264-145 in accordance with Subsection R315-264-145(i).

(e) Post-closure insurance.

(1) An owner or operator may satisfy the requirements of Section R315-264-145 by obtaining post-closure insurance which conforms to the requirements of Subsection R315-264-145(e) and submitting a certificate of such insurance to the Director. An owner or operator of a new facility shall submit the certificate of insurance to the Director at least 60 days before the date on which hazardous waste is first received for disposal. The insurance shall be effective before this initial receipt of

hazardous waste. At a minimum, the insurer shall be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

(2) The wording of the certificate of insurance shall be identical to the wording specified in Subsection R315-264-151(e).

(3) The post-closure insurance policy shall be issued for a face amount at least equal to the current post-closure cost estimate, except as provided in Subsection R315-264-145(g). The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer shall not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.

(4) The post-closure insurance policy shall guarantee that funds will be available to provide post-closure care of the facility whenever the post-closure period begins. The policy shall also guarantee that once post-closure care begins, the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the Director, to such party or parties as the Director specifies.

(5) An owner or operator or any other person authorized to conduct post-closure care may request reimbursements for post-closure care expenditures by submitting itemized bills to the Director. Within 60 days after receiving bills for post-closure care activities, the Director shall instruct the insurer to make reimbursements in those amounts as the Director specifies in writing, if the Director determines that the post-closure care expenditures are in accordance with the approved post-closure plan or otherwise justified. If the Director does not instruct the insurer to make such reimbursements, he shall provide the owner or operator with a detailed written statement of reasons.

(6) The owner or operator shall maintain the policy in full force and effect until the Director consents to termination of the policy by the owner or operator as specified in Subsection R315-264-145(e)(11). Failure to pay the premium, without substitution of alternate financial assurance as specified in Section R315-264-145, shall constitute a significant violation of these regulations, warranting such remedy as the Director deems necessary. Such violation shall be deemed to begin upon receipt by the Director of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration.

(7) Each policy shall contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.

(8) The policy shall provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy shall, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the Director. Cancellation, termination, or failure to renew may not occur, however, during the 120 days beginning with the date of receipt of the notice by both the Director and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy shall remain in full force and effect in the event that on or before the date of expiration:

(i) The Director deems the facility abandoned; or

(ii) The permit is terminated or revoked or a new permit is denied; or

(iii) Closure is ordered by the Director or a U.S. district court or other court of competent jurisdiction; or

(iv) The owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11, Bankruptcy,

U.S. Code; or

(v) The premium due is paid.

(9) Whenever the current post-closure cost estimate increases to an amount greater than the face amount of the policy during the operating life of the facility, the owner or operator, within 60 days after the increase, shall either cause the face amount to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the Director, or obtain other financial assurance as specified in Section R315-264-145 to cover the increase. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the face amount may be reduced to the amount of the current post-closure cost estimate following written approval by the Director.

(10) Commencing on the date that liability to make payments pursuant to the policy accrues, the insurer shall thereafter annually increase the face amount of the policy. Such increase shall be equivalent to the face amount of the policy, less any payments made, multiplied by an amount equivalent to 85 percent of the most recent investment rate or of the equivalent coupon-issue yield announced by the U.S. Treasury for 26-week Treasury securities.

(11) The Director shall give written consent to the owner or operator that he may terminate the insurance policy when:

(i) An owner or operator substitutes alternate financial assurance as specified in Section R315-264-145; or

(ii) The Director releases the owner or operator from the requirements of Section R315-264-145 in accordance with Subsection R315-264-145(i).

(f) Financial test and corporate guarantee for post-closure care.

(1) An owner or operator may satisfy the requirements of Section R315-264-145 by demonstrating that he passes a financial test as specified in Subsection R315-264-145(f). To pass this test the owner or operator shall meet the criteria of either Subsection R315-264-145(f)(1)(i) or (ii):

(i) The owner or operator shall have:

(A) Two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and

(B) Net working capital and tangible net worth each at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least \$10 million; and

(D) Assets in the United States amounting to at least 90 percent of his total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(ii) The owner or operator shall have:

(A) A current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A or Baa as issued by Moody's; and

(B) Tangible net worth at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least \$10 million; and

(D) Assets located in the United States amounting to at least 90 percent of his total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(2) The phrase "current closure and post-closure cost estimates" as used in Subsection R315-264-145(f)(1) refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer, Subsection R315-264-151(f). The phrase "current plugging and abandonment cost estimates" as used in Subsection R315-264-

145(f)(1) refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer, 40 CFR 144.70(f).

(3) To demonstrate that he meets this test, the owner or operator shall submit the following items to the Director:

(i) A letter signed by the owner's or operator's chief financial officer and worded as specified in Subsection R315-264-151(f); and

(ii) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

(iii) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

(A) He has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

(B) In connection with that procedure, no matters came to his attention which caused him to believe that the specified data should be adjusted.

(4) An owner or operator of a new facility shall submit the items specified in Subsection R315-264-145(f)(3) to the Director at least 60 days before the date on which hazardous waste is first received for disposal.

(5) After the initial submission of items specified in Subsection R315-264-145(f)(3), the owner or operator shall send updated information to the Director within 90 days after the close of each succeeding fiscal year. This information shall consist of all three items specified in Subsection R315-264-145(f)(3).

(6) If the owner or operator no longer meets the requirements of Subsection R315-264-145(f)(1), he shall send notice to the Director of intent to establish alternate financial assurance as specified in Section R315-264-145. The notice shall be sent by certified mail within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator shall provide the alternate financial assurance within 120 days after the end of such fiscal year.

(7) The Director may, based on a reasonable belief that the owner or operator may no longer meet the requirements of Subsection R315-264-145(f)(1), require reports of financial condition at any time from the owner or operator in addition to those specified in Subsection R315-264-145(f)(3). If the Director finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of Subsection R315-264-145(f)(1), the owner or operator shall provide alternate financial assurance as specified in Section R315-264-145 within 30 days after notification of such a finding.

(8) The Director may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements, see Subsection R315-264-145(f)(3)(ii). An adverse opinion or a disclaimer of opinion shall be cause for disallowance. The Director shall evaluate other qualifications on an individual basis. The owner or operator shall provide alternate financial assurance as specified in Section R315-264-145 within 30 days after notification of the disallowance.

(9) During the period of post-closure care, the Director may approve a decrease in the current post-closure cost estimate for which this test demonstrates financial assurance if the owner or operator demonstrates to the Director that the amount of the cost estimate exceeds the remaining cost of post-closure care.

(10) The owner or operator is no longer required to submit the items specified in Subsection R315-264-145(f)(3) when:

(i) An owner or operator substitutes alternate financial assurance as specified in Section R315-264-145; or

(ii) The Director releases the owner or operator from the requirements of Section R315-264-145 in accordance with Subsection R315-264-145(i).

(11) An owner or operator may meet the requirements of Section R315-264-145 by obtaining a written guarantee. The guarantor shall be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor shall meet the requirements for owners or operators in Subsections R315-264-145(f)(1) through (9) and shall comply with the terms of the guarantee. The wording of the guarantee shall be identical to the wording specified in Subsection R315-264-151(h). A certified copy of the guarantee shall accompany the items sent to the Director as specified in Subsection R315-264-145(f)(3). One of these items shall be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter shall describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter shall describe this "substantial business relationship" and the value received in consideration of the guarantee. The terms of the guarantee shall provide that:

(i) If the owner or operator fails to perform post-closure care of a facility covered by the corporate guarantee in accordance with the post-closure plan and other permit requirements whenever required to do so, the guarantor shall do so or establish a trust fund as specified in Subsection R315-264-145(a) in the name of the owner or operator.

(ii) The corporate guarantee shall remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the Director. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Director, as evidenced by the return receipts.

(iii) If the owner or operator fails to provide alternate financial assurance as specified in Section R315-264-145 and obtain the written approval of such alternate assurance from the Director within 90 days after receipt by both the owner or operator and the Director of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor shall provide such alternate financial assurance in the name of the owner or operator.

(g) Use of multiple financial mechanisms. An owner or operator may satisfy the requirements of Section R315-264-145 by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, and insurance. The mechanisms shall be as specified in Subsections R315-264-145(a), (b), (d), and (e), respectively, except that it is the combination of mechanisms, rather than the single mechanism, which shall provide financial assurance for an amount at least equal to the current post-closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, he may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The Director may use any or all of the mechanisms to provide for post-closure care of the facility.

(h) Use of a financial mechanism for multiple facilities. An owner or operator may use a financial assurance mechanism specified in Section R315-264-145 to meet the requirements of Section R315-264-145 for more than one facility. Evidence of financial assurance submitted to the Director shall include a list showing, for each facility, the EPA Identification Number, name, address, and the amount of funds for post-closure care

assured by the mechanism. If the facilities covered by the mechanism are in more than one State, identical evidence of financial assurance shall be submitted to and maintained with the State Agency regulating hazardous waste in states other than Utah or with the appropriate Regional Administrator if the facility is located in an unauthorized State. The amount of funds available through the mechanism shall be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for post-closure care of any of the facilities covered by the mechanism, the Director may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

(i) Release of the owner or operator from the requirements of Section R315-264-145. Within 60 days after receiving certifications from the owner or operator and a qualified Professional Engineer that the post-closure care period has been completed for a hazardous waste disposal unit in accordance with the approved plan, the Director shall notify the owner or operator that he is no longer required to maintain financial assurance for post-closure of that unit, unless the Director has reason to believe that post-closure care has not been in accordance with the approved post-closure plan. The Director shall provide the owner or operator a detailed written statement of any such reason to believe that post-closure care has not been in accordance with the approved post-closure plan.

R315-264-146. Use of a Mechanism for Financial Assurance of Both Closure and Post-Closure Care.

An owner or operator may satisfy the requirements for financial assurance for both closure and post-closure care for one or more facilities by using a trust fund, surety bond, letter of credit, insurance, financial test, or corporate guarantee that meets the specifications for the mechanism in both Sections R315-264-143 and 145. The amount of funds available through the mechanism shall be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for financial assurance of closure and of post-closure care.

R315-264-147. Liability Requirements.

(a) Coverage for sudden accidental occurrences. An owner or operator of a hazardous waste treatment, storage, or disposal facility, or a group of such facilities, shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator shall have and maintain liability coverage for sudden accidental occurrences in the amount of at least \$1 million per occurrence with an annual aggregate of at least \$2 million, exclusive of legal defense costs. This liability coverage may be demonstrated as specified in Subsections R315-264-147(a)(1), (2), (3), (4), (5), or (6):

(1) An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in Subsection R315-264-147(a).

(i) Each insurance policy shall be amended by attachment of the Hazardous Waste Facility Liability Endorsement or evidenced by a Certificate of Liability Insurance. The wording of the endorsement shall be identical to the wording specified in Subsection R315-264-151(i). The wording of the certificate of insurance shall be identical to the wording specified in Subsection R315-264-151(j). The owner or operator shall submit a signed duplicate original of the endorsement or the certificate of insurance to the Director. If requested by a Director, the owner or operator shall provide a signed duplicate original of the insurance policy. An owner or operator of a new facility shall submit the signed duplicate original of the

Hazardous Waste Facility Liability Endorsement or the Certificate of Liability Insurance to the Director at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The insurance shall be effective before this initial receipt of hazardous waste.

(ii) Each insurance policy shall be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

(2) An owner or operator may meet the requirements Section R315-264-146 by passing a financial test or using the guarantee for liability coverage as specified in Subsections R315-264-147(f) and (g).

(3) An owner or operator may meet the requirements of Section R315-264-147 by obtaining a letter of credit for liability coverage as specified in Subsection R315-264-147(h).

(4) An owner or operator may meet the requirements Section R315-264-146 by obtaining a surety bond for liability coverage as specified in Subsection R315-264-147(i).

(5) An owner or operator may meet the requirements Section R315-264-146 by obtaining a trust fund for liability coverage as specified in Subsection R315-264-147(j).

(6) An owner or operator may demonstrate the required liability coverage through the use of combinations of insurance, financial test, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated shall total at least the minimum amounts required by Section R315-264-147. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under Subsection R315-264-147(a), the owner or operator shall specify at least one such assurance as "primary" coverage and shall specify other assurance as "excess" coverage.

(7) An owner or operator shall notify the Director in writing within 30 days whenever:

(i) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in Subsections R315-264-147(a)(1) through (a)(6); or

(ii) A Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under Subsections R315-264-147(a)(1) through (a)(6); or

(iii) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under Subsections R315-264-147(a)(1) through (a)(6).

(b) Coverage for nonsudden accidental occurrences. An owner or operator of a surface impoundment, landfill, land treatment facility, or disposal miscellaneous unit that is used to manage hazardous waste, or a group of such facilities, shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by nonsudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator shall have and maintain liability coverage for nonsudden accidental occurrences in the amount of at least \$3 million per occurrence with an annual aggregate of at least \$6 million, exclusive of legal defense costs. An owner or operator who shall meet the requirements Section R315-264-147 may combine the required per-occurrence coverage levels for sudden and nonsudden accidental

occurrences into a single per-occurrence level, and combine the required annual aggregate coverage levels for sudden and nonsudden accidental occurrences into a single annual aggregate level. Owners or operators who combine coverage levels for sudden and nonsudden accidental occurrences shall maintain liability coverage in the amount of at least \$4 million per occurrence and \$8 million annual aggregate. This liability coverage may be demonstrated as specified in Subsections R315-264-147(b)(1), (2), (3), (4), (5), or (6):

(1) An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in Subsection R315-264-147(b).

(i) Each insurance policy shall be amended by attachment of the Hazardous Waste Facility Liability Endorsement or evidenced by a Certificate of Liability Insurance. The wording of the endorsement shall be identical to the wording specified in Subsection R315-264-151(i). The wording of the certificate of insurance shall be identical to the wording specified in Subsection R315-264-151(j). The owner or operator shall submit a signed duplicate original of the endorsement or the certificate of insurance to the Director. If requested by a Director, the owner or operator shall provide a signed duplicate original of the insurance policy. An owner or operator of a new facility shall submit the signed duplicate original of the Hazardous Waste Facility Liability Endorsement or the Certificate of Liability Insurance to the Director at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The insurance shall be effective before this initial receipt of hazardous waste.

(ii) Each insurance policy shall be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

(2) An owner or operator may meet the requirements Section R315-264-147 by passing a financial test or using the guarantee for liability coverage as specified in Subsections R315-264-147(f) and (g).

(3) An owner or operator may meet the requirements of Section R315-264-147 by obtaining a letter of credit for liability coverage as specified in Subsection R315-264-147(h).

(4) An owner or operator may meet the requirements of Section R315-264-147 by obtaining a surety bond for liability coverage as specified in Subsection R315-264-147(i).

(5) An owner or operator may meet the requirements of Section R315-264-147 by obtaining a trust fund for liability coverage as specified in Subsection R315-264-147(j).

(6) An owner or operator may demonstrate the required liability coverage through the use of combinations of insurance, financial test, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated shall total at least the minimum amount required by Section R315-264-147. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under Subsection R315-264-147(b), the owner or operator shall specify at least one such assurance as "primary" coverage and shall specify other assurance as "excess" coverage.

(7) An owner or operator shall notify the Director in writing within 30 days whenever:

(i) A Claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in Subsections R315-264-147(b)(1) through (b)(6); or

(ii) A Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste

treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under Subsections R315-264-147(b)(1) through (b)(6); or

(iii) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under Subsections R315-264-147(b)(1) through (b)(6).

(c) Request for variance. If an owner or operator can demonstrate to the satisfaction of the Director that the levels of financial responsibility required by Subsection R315-264-147(a) or (b) are not consistent with the degree and duration of risk associated with treatment, storage, or disposal at the facility or group of facilities, the owner or operator may obtain a variance from the Director. The request for a variance shall be submitted to the Director as part of the application under Subsection R315-270-14 for a facility that does not have a permit, or pursuant to the procedures for permit modification under Subsection R315-124-5 for a facility that has a permit. If granted, the variance shall take the form of an adjusted level of required liability coverage, such level to be based on the Director's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. The Director may require an owner or operator who requests a variance to provide such technical and engineering information as is deemed necessary by the Director to determine a level of financial responsibility other than that required by Subsection R315-264-147(a) or (b). Any request for a variance for a permitted facility shall be treated as a request for a permit modification under Subsections R315-270-41(a)(5) and R315-124-5.

(d) Adjustments by the Director. If the Director determines that the levels of financial responsibility required by Subsection R315-264-147(a) or (b) are not consistent with the degree and duration of risk associated with treatment, storage, or disposal at the facility or group of facilities, the Director may adjust the level of financial responsibility required under Subsection R315-264-147(a) or (b) as may be necessary to protect human health and the environment. This adjusted level shall be based on the Director's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. In addition, if the Director determines that there is a significant risk to human health and the environment from nonsudden accidental occurrences resulting from the operations of a facility that is not a surface impoundment, landfill, or land treatment facility, he may require that an owner or operator of the facility comply with Subsection R315-264-147(b). An owner or operator shall furnish to the Director, within a reasonable time, any information which the Director requests to determine whether cause exists for such adjustments of level or type of coverage. Any adjustment of the level or type of coverage for a facility that has a permit shall be treated as a permit modification under Subsections R315-270-41(a)(5) and Section R315-124-5.

(e) Period of coverage. Within 60 days after receiving certifications from the owner or operator and a qualified Professional Engineer that final closure has been completed in accordance with the approved closure plan, the Director shall notify the owner or operator in writing that he is no longer required by Section R315-264-147 to maintain liability coverage for that facility, unless the Director has reason to believe that closure has not been in accordance with the approved closure plan.

(f) Financial test for liability coverage.

(1) An owner or operator may satisfy the requirements of Section R315-264-147 by demonstrating that he passes a financial test as specified in Subsection R315-264-147(f). To

pass this test the owner or operator shall meet the criteria of Subsection R315-264-147(f)(1)(i) or (ii):

(i) The owner or operator shall have:

(A) Net working capital and tangible net worth each at least six times the amount of liability coverage to be demonstrated by this test; and

(B) Tangible net worth of at least \$10 million; and

(C) Assets in the United States amounting to either:

(I) At least 90 percent of his total assets; or

(II) At least six times the amount of liability coverage to be demonstrated by this test.

(ii) The owner or operator shall have:

(A) A current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's, or Aaa, Aa, A, or Baa as issued by Moody's; and

(B) Tangible net worth of at least \$10 million; and

(C) Tangible net worth at least six times the amount of liability coverage to be demonstrated by this test; and

(D) Assets in the United States amounting to either:

(I) At least 90 percent of his total assets; or

(II) At least six times the amount of liability coverage to be demonstrated by this test.

(2) The phrase "amount of liability coverage" as used in Subsection R315-264-147(f)(1) refers to the annual aggregate amounts for which coverage is required under Section R315-264-147(a) and (b).

(3) To demonstrate that he meets this test, the owner or operator shall submit the following three items to the Director:

(i) A letter signed by the owner's or operator's chief financial officer and worded as specified in Subsection R315-264-151(g). If an owner or operator is using the financial test to demonstrate both assurance for closure or post-closure care, as specified by Subsections R315-264-143(f), 145(f); or 40 CFR 265.143(e), and 145(e), which are adopted by reference; and liability coverage, he shall submit the letter specified in Subsection R315-264-151(g) to cover both forms of financial responsibility; a separate letter as specified in Subsection R315-264-151(f) is not required.

(ii) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year.

(iii) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

(A) He has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

(B) In connection with that procedure, no matters came to his attention which caused him to believe that the specified data should be adjusted.

(4) An owner or operator of a new facility shall submit the items specified in Subsection R315-264-147(f)(3) to the Director at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal.

(5) After the initial submission of items specified in Subsection R315-264-147(f)(3), the owner or operator shall send updated information to the Director within 90 days after the close of each succeeding fiscal year. This information shall consist of all three items specified in Subsection R315-264-147(f)(3).

(6) If the owner or operator no longer meets the requirements of Subsection R315-264-147(f)(1), he shall obtain insurance, a letter of credit, a surety bond, a trust fund, or a guarantee for the entire amount of required liability coverage as specified in Section R315-264-147. Evidence of liability coverage shall be submitted to the Director within 90 days after the end of the fiscal year for which the year-end financial data

show that the owner or operator no longer meets the test requirements.

(7) The Director may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements, see Subsection R315-264-147(f)(3)(ii). An adverse opinion or a disclaimer of opinion shall be cause for disallowance. The Director shall evaluate other qualifications on an individual basis. The owner or operator shall provide evidence of insurance for the entire amount of required liability coverage as specified in Section R315-264-147 within 30 days after notification of disallowance.

(g) Guarantee for liability coverage.

(1) Subject to Subsection R315-264-147(g)(2), an owner or operator may meet the requirements of Section R315-264-147 by obtaining a written guarantee, hereinafter referred to as "guarantee." The guarantor shall be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor shall meet the requirements for owners or operators in Section R315-264-147(f)(1) through (f)(6). The wording of the guarantee shall be identical to the wording specified in Subsection R315-264-151(h)(2). A certified copy of the guarantee shall accompany the items sent to the Director as specified in Subsection R315-264-147(f)(3). One of these items shall be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, this letter shall describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter shall describe this "substantial business relationship" and the value received in consideration of the guarantee.

(i) If the owner or operator fails to satisfy a judgment based on a determination of liability for bodily injury or property damage to third parties caused by sudden or nonsudden accidental occurrences, or both as the case may be, arising from the operation of facilities covered by this corporate guarantee, or fails to pay an amount agreed to in settlement of claims arising from or alleged to arise from such injury or damage, the guarantor shall do so up to the limits of coverage.

(ii) Reserved

(2)(i) In the case of corporations incorporated in the United States, a guarantee may be used to satisfy the requirements Section R315-264-147 only if the Attorneys General or Insurance Commissioners of the State in which the guarantor is incorporated have submitted a written statement to the Director that a guarantee executed as described in Section R315-264-147 and Subsection R315-264-151(h)(2) is a legally valid and enforceable obligation in that State.

(ii) In the case of corporations incorporated outside the United States, a guarantee may be used to satisfy the requirements Section R315-264-147 only if

(A) the non-U.S. corporation has identified a registered agent for service of process in Utah and in the State in which it has its principal place of business, and

(B) the Attorney General or Insurance Commissioner of the State in which the guarantor corporation has its principal place of business, has submitted a written statement to the Director that a guarantee executed as described in Section R315-264-147 and Subsection R315-264-151(h)(2) is a legally valid and enforceable obligation in that State.

(h) Letter of credit for liability coverage.

(1) An owner or operator may satisfy the requirements of Section R315-264-147 by obtaining an irrevocable standby letter of credit that conforms to the requirements of Subsection R315-264-147(h) and submitting a copy of the letter of credit to the Director.

(2) The financial institution issuing the letter of credit shall be an entity that has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a Federal or State agency.

(3) The wording of the letter of credit shall be identical to the wording specified in Subsection R315-264-151(k).

(4) An owner or operator who uses a letter of credit to satisfy the requirements Section R315-264-147 may also establish a standby trust fund. Under the terms of such a letter of credit, all amounts paid pursuant to a draft by the trustee of the standby trust shall be deposited by the issuing institution into the standby trust in accordance with instructions from the trustee. The trustee of the standby trust fund shall be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(5) The wording of the standby trust fund shall be identical to the wording specified in Subsection R315-264-151(n).

(i) Surety bond for liability coverage.

(1) An owner or operator may satisfy the requirements of Section R315-264-147 by obtaining a surety bond that conforms to the requirements of Subsection R315-264-147(i) and submitting a copy of the bond to the Director.

(2) The surety company issuing the bond shall be among those listed as acceptable sureties on Federal bonds in the most recent Circular 570 of the U.S. Department of the Treasury.

(3) The wording of the surety bond shall be identical to the wording specified in Subsection R315-264-151(l).

(4) A surety bond may be used to satisfy the requirements Section R315-264-147 only if the Attorneys General or Insurance Commissioners of the State in which the surety is incorporated has submitted a written statement to the Director that a surety bond executed as described in Section R315-264-147 and Subsection R315-264-151(l) is a legally valid and enforceable obligation in that State.

(j) Trust fund for liability coverage.

(1) An owner or operator may satisfy the requirements of Section R315-264-147 by establishing a trust fund that conforms to the requirements of Subsection R315-264-147(j) and submitting an originally signed duplicate of the trust agreement to the Director.

(2) The trustee shall be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(3) The trust fund for liability coverage shall be funded for the full amount of the liability coverage to be provided by the trust fund before it may be relied upon to satisfy the requirements of Section R315-264-147. If at any time after the trust fund is created the amount of funds in the trust fund is reduced below the full amount of the liability coverage to be provided, the owner or operator, by the anniversary date of the establishment of the fund, shall either add sufficient funds to the trust fund to cause its value to equal the full amount of liability coverage to be provided, or obtain other financial assurance as specified in Section R315-264-147 to cover the difference. For purposes of Subsection R315-264-147(j), "the full amount of the liability coverage to be provided" means the amount of coverage for sudden and/or nonsudden occurrences required to be provided by the owner or operator by Section R315-264-147, less the amount of financial assurance for liability coverage that is being provided by other financial assurance mechanisms being used to demonstrate financial assurance by the owner or operator.

(4) The wording of the trust fund shall be identical to the wording specified in Subsection R315-264-151(m).

(k) Notwithstanding any other provision of Rule R315-264, an owner or operator using liability insurance to satisfy the requirements of Section R315-264-147 may use, until October 16, 1982, a Hazardous Waste Facility Liability Endorsement or

Certificate of Liability Insurance that does not certify that the insurer is licensed to transact the business of insurance, or eligible as an excess or surplus lines insurer, in one or more States.

R315-264-148. Incapacity of Owners or Operators, Guarantors, or Financial Institutions.

(a) An owner or operator shall notify the Director by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11, Bankruptcy, U.S. Code, naming the owner or operator as debtor, within 10 days after commencement of the proceeding. A guarantor of a corporate guarantee as specified in Subsections R315-264-143(f) and 145(f) shall make such a notification if he is named as debtor, as required under the terms of the corporate guarantee, Subsection R315-264-151(h).

(b) An owner or operator who fulfills the requirements of Sections R315-264-143, 145, or 147 by obtaining a trust fund, surety bond, letter of credit, or insurance policy shall be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee or of the institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments. The owner or operator shall establish other financial assurance or liability coverage within 60 days after such an event

R315-264-151. Wording of the Instruments.

(a)(1) A trust agreement for a trust fund, as specified in Subsection R315-264-143(a) or Subsection R315-264-145(a) or 40 CFR 265.143(a) or 145(a), which are adopted by reference; shall be worded as follows, except that instructions in parentheses, (), are to be replaced with the relevant information and the parentheses deleted:

Trust Agreement

Trust Agreement, the "Agreement," entered into as of (date) by and between (name of the owner or operator), a (name of State) (insert "corporation," "partnership," "association," or "proprietorship"), the "Grantor," and (name of corporate trustee), (insert "incorporated in the State of _____" or "a national bank"), the "Trustee."

Whereas, the Utah Waste Management and Radiation Control Board has established certain regulations applicable to the Grantor, requiring that an owner or operator of a hazardous waste management facility shall provide assurance that funds will be available when needed for closure and/or post-closure care of the facility,

Whereas, the Grantor has elected to establish a trust to provide all or part of such financial assurance for the facilities identified herein,

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee,

Now, Therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

(c) The term "Board", "Waste Management and Radiation Control Board" created pursuant to Utah Code Annotated 19-1-106.

(d) The term "Director" means the Director, of the Division of Waste Management and Radiation Control his successors, designees, and any subsequent entity of the State of Utah upon whom the duties of regulation and enforcement of

regulations governing hazardous waste.

Section 2. Identification of Facilities and Cost Estimates. This Agreement pertains to the facilities and cost estimates identified on attached Schedule A (on Schedule A, for each facility list the EPA Identification Number, name, address, and the current closure and/or post-closure cost estimates, or portions thereof, for which financial assurance is demonstrated by this Agreement).

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of the Director of the Utah Division of Waste Management and Radiation Control. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the Director.

Section 4. Payment for Closure and Post-Closure Care. The Trustee shall make payments from the Fund as the Director shall direct, in writing, to provide for the payment of the costs of closure and/or post-closure care of the facilities covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the Director from the Fund for closure and post-closure expenditures in such amounts as the Director shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the Director specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions Section R315-264-151. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund

created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the appropriate Director a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the Director shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken

hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the Director, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendment to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the Director to the Trustee shall be in writing, signed by the Director, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or EPA hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the Director, except as provided for herein.

Section 15. Notice of Nonpayment. The Trustee shall notify the Grantor and the Director and the appropriate Regional Administrator(s), by certified mail within 10 days following the expiration of the 30-day period after the anniversary of the establishment of the Trust, if no payment is received from the Grantor during that period. After the pay-in period is completed, the Trustee shall not be required to send a notice of nonpayment.

Section 16. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the Director, or by the Trustee and the Director if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the Director, or by the Trustee and the Director, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 18. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the Director issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be

subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the State of Utah.

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written: The parties below certify that the wording of this Agreement is identical to the wording specified in Subsection R315-264-151(a)(1) as such regulations were constituted on the date first above written.

(Signature of Grantor)

(Title)

Attest:

(Title)

(Seal)

(Signature of Trustee)

Attest:

(Title)

(Seal)

(2) The following is an example of the certification of acknowledgment which shall accompany the trust agreement for a trust fund as specified in Subsections R315-264-143(a) and 145(a) or 40 CFR 265.143(a) or 145(a), which is adopted by reference. State requirements may differ on the proper content of this acknowledgment.

State of

County of

On this (date), before me personally came (owner or operator) to me known, who, being by me duly sworn, did depose and say that she/he resides at (address), and she/he is (title) of (corporation), the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

(Signature of Notary Public)

(b) A surety bond guaranteeing payment into a trust fund, as specified in Subsection R315-264-143(b) or 145(b) or 40 CFR 265.143(b) or 145(b), which are adopted by reference, shall be worded as follows, except that instructions in parentheses, (), are to be replaced with the relevant information and the parentheses deleted:

Financial Guarantee Bond

Date bond executed:

Effective date:

Principal: (legal name and business address of owner or operator)

Type of Organization: (insert "individual," "joint venture," "partnership," or "corporation")

State of incorporation:

Surety(ies): (name(s) and business address(es))

EPA Identification Number, name, address and closure and/or post-closure amount(s) for each facility guaranteed by this bond (indicate closure and post-closure amounts separately):

Total penal sum of bond: \$

Surety's bond number:

Know All Persons By These Presents, That we, the Principal and Surety(ies) hereto are firmly bound to the Director of the Utah Division of Waste Management and Radiation

Control (hereinafter called Director), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required, under the Utah Solid and Hazardous Waste Act (the Act), to have a permit or interim status in order to own or operate each hazardous waste management facility identified above, and

Whereas said Principal is required to provide financial assurance for closure, or closure and post-closure care, as a condition of the permit or interim status, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, Therefore, the conditions of the obligation are such that if the Principal shall faithfully, before the beginning of final closure of each facility identified above, fund the standby trust fund in the amount(s) identified above for the facility,

Or, if the Principal shall fund the standby trust fund in such amount(s) within 15 days after a final order to begin closure is issued by an the Director or a U.S. district court or other court of competent jurisdiction,

Or, if the Principal shall provide alternate financial assurance, as specified in Sections R315-264-140 through 148 or 40 CFR 265.140 through 148, which are adopted by reference; as applicable, and obtain the Director's written approval of such assurance, within 90 days after the date notice of cancellation is received by both the Principal and the Director from the Surety(ies), then this obligation shall be null and void; otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by an the Director that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the Director.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the Director, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by both the Principal and the Director, as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the Director.

(The following paragraph is an optional rider that may be included but is not required.)

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new closure and/or post-closure amount, provided that the penal sum does not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the Director.

In Witness Whereof, the Principal and Surety(ies) have

executed this Financial Guarantee Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in Subsection R315-264-151(b) as such regulations were constituted on the date this bond was executed.

Principal

(Signature(s))

(Name(s))

(Title(s))

(Corporate seal)

Corporate Surety(ies)

(Name and address)

State of incorporation:

Liability limit: \$

(Signature(s))

(Name(s) and title(s))

(Corporate seal)

(For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.)

Bond premium: \$

(c) A surety bond guaranteeing performance of closure and/or post-closure care, as specified in Subsection R315-264-143(c) or 145(c), shall be worded as follows, except that the instructions in parentheses,(), are to be replaced with the relevant information and the parentheses deleted:

Performance Bond

Date bond executed:

Effective date:

Principal: (legal name and business address of owner or operator)

Type of organization: (insert "individual," "joint venture," "partnership," or "corporation")

State of incorporation:

Surety(ies): (name(s) and business address(es))

EPA Identification Number, name, address, and closure and/or post-closure amount(s) for each facility guaranteed by this bond (indicate closure and post-closure amounts separately): _____

Total penal sum of bond: \$

Surety's bond number:

Know All Persons By These Presents, That we, the Principal and Surety(ies) hereto are firmly bound to the Director of the Utah Division of Waste Management and Radiation Control (hereinafter called Director), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required, under the Utah Solid and Hazardous Waste Act (the Act), to have a permit in order to own or operate each hazardous waste management facility identified above, and

Whereas said Principal is required to provide financial assurance for closure, or closure and post-closure care, as a condition of the permit, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, Therefore, the conditions of this obligation are such that if the Principal shall faithfully perform closure, whenever

required to do so, of each facility for which this bond guarantees closure, in accordance with the closure plan and other requirements of the permit as such plan and permit may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended,

And, if the Principal shall faithfully perform post-closure care of each facility for which this bond guarantees post-closure care, in accordance with the post-closure plan and other requirements of the permit, as such plan and permit may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended,

Or, if the Principal shall provide alternate financial assurance as specified in Sections R315-264-140 through 148, and obtain the Director's written approval of such assurance, within 90 days after the date notice of cancellation is received by both the Principal and the Director from the Surety(ies), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by an Director that the Principal has been found in violation of the closure requirements of Rule R315-264, for a facility for which this bond guarantees performance of closure, the Surety(ies) shall either perform closure in accordance with the closure plan and other permit requirements or place the closure amount guaranteed for the facility into the standby trust fund as directed by the Director.

Upon notification by the Director that the Principal has been found in violation of the post-closure requirements of Rule R315-264 for a facility for which this bond guarantees performance of post-closure care, the Surety(ies) shall either perform post-closure care in accordance with the post-closure plan and other permit requirements or place the post-closure amount guaranteed for the facility into the standby trust fund as directed by the Director.

Upon notification by the Director that the Principal has failed to provide alternate financial assurance as specified in Sections 315-264-140 through 148, and obtain written approval of such assurance from the Director during the 90 days following receipt by both the Principal and the Director of a notice of cancellation of the bond, the Surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the Director.

The surety(ies) hereby waive(s) notification of amendments to closure plans, permits, applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Director and the appropriate Regional Administrator, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by both the Principal and the Director, as evidenced by the return receipts.

The principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the Director.

(The following paragraph is an optional rider that may be included but is not required.)

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new closure and/or post-closure amount, provided that the penal sum does not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the Director.

In Witness Whereof, The Principal and Surety(ies) have executed this Performance Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in Subsection R315-264-151(c) as such regulation was constituted on the date this bond was executed.

Principal
 (Signature(s))
 (Name(s))
 (Title(s))
 (Corporate seal)
 Corporate Surety(ies)
 (Name and address)
 State of incorporation:
 Liability limit: \$
 (Signature(s))
 (Name(s) and title(s))
 (Corporate seal)

(For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.)
 Bond premium: \$

(d) A letter of credit, as specified in Subsection R315-264-143(d) or 145(d) or 40 CFR 265.143(c) or 145(c), which are adopted by reference, shall be worded as follows, except that instructions in parentheses, (), are to be replaced with the relevant information and the parentheses deleted:

Irrevocable Standby Letter of Credit
 Director of the Division of Waste Management and Radiation Control
 195 North 1950 West
 P.O. Box 144880
 Salt Lake City, UT 84114-4880

Dear Director: We hereby establish our Irrevocable Standby Letter of Credit No. ___ in your favor, at the request and for the account of (owner's or operator's name and address) up to the aggregate amount of (in words) U.S. dollars \$ ___, available upon presentation of

(1) your sight draft, bearing reference to this letter of credit No. ___, and

(2) your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of the Utah Solid and Hazardous Waste Act."

This letter of credit is effective as of (date) and shall expire on (date at least 1 year later), but such expiration date shall be automatically extended for a period of (at least 1 year) on (date) and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify both you and (owner's or operator's name) by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event you are so notified, any unused portion of the credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by both the Director and (owner's or operator's name), as shown on the signed return receipts.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of (owner's or operator's name) in accordance with the Director's instructions.

We certify that the wording of this letter of credit is identical to the wording specified in Subsection R315-264-151(d) as such regulations were constituted on the date shown immediately below.

(Signature(s) and title(s) of official(s) of issuing institution)
 (Date)

This credit is subject to (insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published and copyrighted by the International Chamber of Commerce," or "the Uniform Commercial Code").

(e) A certificate of insurance, as specified in Subsection R315-264-143(e) or 145(e) or 40 CFR 265.143(d) or 145(d), which are adopted by reference, shall be worded as follows, except that instructions in parentheses, (), are to be replaced with the relevant information and the parentheses deleted:

Certificate of Insurance for Closure or Post-Closure Care
 Name and Address of Insurer
 (herein called the "Insurer"):
 Name and Address of Insured
 (herein called the "Insured"):

Facilities Covered: (List for each facility: The EPA Identification Number, name, address, and the amount of insurance for closure and/or the amount for post-closure care (these amounts for all facilities covered shall total the face amount shown below).)

Face Amount:
 Policy Number:
 Effective Date:

The Insurer hereby certifies that it has issued to the Insured the policy of insurance identified above to provide financial assurance for (insert "closure" or "closure and post-closure care" or "post-closure care") for the facilities identified above. The Insurer further warrants that such policy conforms in all respects with the requirements of Subsections R315-264-143(e), or 145(e), or 40 CFR 265.143(d), and 145(d), which are adopted by reference, as applicable and as such regulations were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such regulations is hereby amended to eliminate such inconsistency.

Whenever requested by the Director of the Utah Division of Waste Management and Radiation Control, the Insurer agrees to furnish to the the Director a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in Subsection R315-264-151(e) as such regulations were constituted on the date shown immediately below.

(Authorized signature for Insurer)
 (Name of person signing)
 (Title of person signing)
 Signature of witness or notary:
 (Date)

(f) A letter from the chief financial officer, as specified in Subsection R315-264-143(f) or 145(f), or 40 CFR 265.143(e) or 145(e), which are adopted by reference, shall be worded as follows, except that instructions in parentheses, (), are to be replaced with the relevant information and the parentheses deleted:

Letter From Chief Financial Officer
 Director, Utah Division of Waste Management and Radiation Control.
 195 North 1950 West
 P.O. Box 144880
 Salt Lake City, UT 84114-4880

I am the chief financial officer of (name and address of firm). This letter is in support of this firm's use of the financial test to demonstrate financial assurance for closure and/or post-closure costs, as specified in Sections R315-264-140 through 148 and 40 CFR 265.140 through 148, which are adopted by

reference.

(Fill out the following five paragraphs regarding facilities and associated cost estimates. If your firm has no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA Identification Number, name, address, and current closure and/or post-closure cost estimates. Identify each cost estimate as to whether it is for closure or post-closure care).

1. This firm is the owner or operator of the following facilities for which financial assurance for closure or post-closure care is demonstrated through the financial test specified in Sections R315-264-140 through 148 and 40 CFR 265.140 through 148, which are adopted by reference. The current closure and/or post-closure cost estimates covered by the test are shown for each facility: _____.

2. This firm guarantees, through the guarantee specified in Sections R315-264-140 through 148 and 40 CFR 265.140 through 148, which are adopted by reference, the closure or post-closure care of the following facilities owned or operated by the guaranteed party. The current cost estimates for the closure or post-closure care so guaranteed are shown for each facility: _____. The firm identified above is (insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee ____; or (3) engaged in the following substantial business relationship with the owner or operator _____, and receiving the following value in consideration of this guarantee ____). (Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter).

3. In other jurisdictions, and states where the Director is not authorized to administer the financial requirements of R315-264-140 through 151 or 40 CFR 265.140 through 148, which are adopted by reference, this firm, as owner or operator or guarantor, is demonstrating financial assurance for the closure or post-closure care of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in Sections R315-264-140 through 148 and 40 CFR 265.140 through 148, which are adopted by reference. The current closure and/or post-closure cost estimates covered by such a test are shown for each facility: _____.

4. This firm is the owner or operator of the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, post-closure care, is not demonstrated either to EPA or a State through the financial test or any other financial assurance mechanism specified in Sections R315-264-140 through 148 and 40 CFR 265.140 through 148, which are adopted by reference, or equivalent or substantially equivalent State mechanisms. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility: _____.

5. This firm is the owner or operator of the following UIC facilities for which financial assurance for plugging and abandonment is required under 40 CFR 144. The current closure cost estimates as required by 40 CFR 144.62 are shown for each facility: _____.

This firm (insert "is required" or "is not required") to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on (month, day). The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended (date).

(Fill in Alternative I if the criteria of Subsection R315-264-143(f)(1)(i) or Subsection R315-264-145(f)(1)(i), or 40 CFR 265.143(e)(1)(i) or 145(e)(1)(i), which are adopted by reference, are used. Fill in Alternative II if the criteria of Subsection

R315-264-143(f)(1)(ii) or 40 CFR 265.143(e)(1)(ii) or 145(e)(1)(ii) or 145(f)(1)(ii), which are adopted by reference, are used.)

Alternative I

1. Sum of current closure and post-closure cost estimate (total of all cost estimates shown in the five paragraphs above) \$ _____

*2. Total liabilities (if any portion of the closure or post-closure cost estimates is included in total liabilities, you may deduct the amount of that portion from this line and add that amount to lines 3 and 4) \$ _____

*3. Tangible net worth \$ _____

*4. Net worth \$ _____

*5. Current assets \$ _____

*6. Current liabilities \$ _____

7. Net working capital (line 5 minus line 6) \$ _____

*8. The sum of net income plus depreciation, depletion, and amortization \$ _____

*9. Total assets in U.S. (required only if less than 90% of firm's assets are located in the U.S.) \$ _____

10. Is line 3 at least \$10 million? (Yes/No) _____

11. Is line 3 at least 6 times line 1? (Yes/No) _____

12. Is line 7 at least 6 times line 1? (Yes/No) _____

*13. Are at least 90% of firm's assets located in the U.S.? If not, complete line 14 (Yes/No) _____

14. Is line 9 at least 6 times line 1? (Yes/No) _____

15. Is line 2 divided by line 4 less than 2.0? (Yes/No) _____

16. Is line 8 divided by line 2 greater than 0.1? (Yes/No) _____

17. Is line 5 divided by line 6 greater than 1.5? (Yes/No) _____

Alternative II

1. Sum of current closure and post-closure cost estimates (total of all cost estimates shown in the five paragraphs above) \$ _____

2. Current bond rating of most recent issuance of this firm and name of rating service _____

3. Date of issuance of bond _____

4. Date of maturity of bond _____

*5. Tangible net worth (if any portion of the closure and post-closure cost estimates is included in "total liabilities" on your firm's financial statements, you may add the amount of that portion to this line) \$ _____

*6. Total assets in U.S. (required only if less than 90% of firm's assets are located in the U.S.) \$ _____

7. Is line 5 at least \$10 million? (Yes/No) _____

8. Is line 5 at least 6 times line 1? (Yes/No) _____

*9. Are at least 90% of firm's assets located in the U.S.? If not, complete line 10 (Yes/No) _____

10. Is line 6 at least 6 times line 1? (Yes/No) _____

I hereby certify that the wording of this letter is identical to the wording specified in Subsection R315-264-151(f) as such regulations were constituted on the date shown immediately below.

(Signature)

(Name)

(Title)

(Date)

(g) A letter from the chief financial officer, as specified in Subsection R315-264-147(f) or 40 CFR 265.147(f), which is adopted by reference, shall be worded as follows, except that instructions in parentheses, (), are to be replaced with the relevant information and the parentheses deleted.

Letter From Chief Financial Officer

Director, Utah Division of Waste Management and Radiation Control.

195 North 1950 West

P.O. Box 144880

Salt Lake City, UT 84114-4880

I am the chief financial officer of (firm's name and address). This letter is in support of the use of the financial test to demonstrate financial responsibility for liability coverage (insert "and closure and/or post-closure care" if applicable) as specified in Sections R315-264-140 through 148 and 40 CFR 265.140 through 148, which are adopted by reference.

(Fill out the following paragraphs regarding facilities and liability coverage. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA Identification Number, name, and address).

The firm identified above is the owner or operator of the following facilities for which liability coverage for (insert "sudden" or "nonsudden" or "both sudden and nonsudden") accidental occurrences is being demonstrated through the financial test specified in Sections R315-264-140 through 148 and 40 CFR 265.140 through 148, which are adopted by reference:

The firm identified above guarantees, through the guarantee specified in Sections R315-264-140 through 148 and 40 CFR 265.140 through 148, which are adopted by reference, liability coverage for (insert "sudden" or "nonsudden" or "both sudden and nonsudden") accidental occurrences at the following facilities owned or operated by the following: _____. The firm identified above is (insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee ____; or (3) engaged in the following substantial business relationship with the owner or operator ____, and receiving the following value in consideration of this guarantee ____). (Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter.)

(If you are using the financial test to demonstrate coverage of both liability and closure and post-closure care, fill in the following five paragraphs regarding facilities and associated closure and post-closure cost estimates. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA identification number, name, address, and current closure and/or post-closure cost estimates. Identify each cost estimate as to whether it is for closure or post-closure care.)

1. The firm identified above owns or operates the following facilities for which financial assurance for closure or post-closure care or liability coverage is demonstrated through the financial test specified in Sections R315-264-140 through 148 and 40 CFR 265.140 through 148, which are adopted by reference. The current closure and/or post-closure cost estimate covered by the test are shown for each facility: _____.

2. The firm identified above guarantees, through the guarantee specified in Sections R315-264-140 through 148 and 40 CFR 265.140 through 148, which are adopted by reference, the closure and post-closure care or liability coverage of the following facilities owned or operated by the guaranteed party. The current cost estimates for closure or post-closure care so guaranteed are shown for each facility: _____.

3. In other jurisdictions, and states where the Director is not authorized to administer the financial requirements of R315-264-140 through 151 or 40 CFR 265.140 through 148, which are adopted by reference, this firm is demonstrating financial assurance for the closure or post-closure care of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in Sections R315-264-140 through 148 and 40 CFR 265.140 through 148, which are adopted by reference. The current closure or post-closure cost estimates covered by such a test are shown for each facility: _____.

4. The firm identified above owns or operates the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, post-closure care, is not demonstrated either to EPA or a State through the financial test or any other financial assurance mechanisms specified in Sections R315-264-140 through 148 and 40 CFR 265.140 through 148, which are adopted by reference, or equivalent or substantially equivalent State mechanisms. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility: _____.

5. This firm is the owner or operator or guarantor of the following UIC facilities for which financial assurance for plugging and abandonment is required under 40 CFR 144 and is assured through a financial test. The current closure cost estimates as required by 40 CFR 144.62 are shown for each facility: _____.

This firm (insert "is required" or "is not required") to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on (month, day). The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended (date).

Part A. Liability Coverage for Accidental Occurrences

(Fill in Alternative I if the criteria of Subsection R315-264-147(f)(1)(i) or 40 CFR 265.147(f)(1)(i), which is adopted by reference, are used. Fill in Alternative II if the criteria of Subsection R315-264-147(f)(1)(ii) or 40 CFR 265.147(f)(1)(ii), which is adopted by reference, are used.)

Alternative I

1. Amount of annual aggregate liability coverage to be demonstrated \$ _____.

*2. Current assets \$ _____.

*3. Current liabilities \$ _____.

4. Net working capital (line 2 minus line 3) \$ _____.

*5. Tangible net worth \$ _____.

*6. If less than 90% of assets are located in the U.S., give total U.S. assets \$ _____.

7. Is line 5 at least \$10 million? (Yes/No) _____.

8. Is line 4 at least 6 times line 1? (Yes/No) _____.

9. Is line 5 at least 6 times line 1? (Yes/No) _____.

*10. Are at least 90% of assets located in the U.S.? (Yes/No) _____. If not, complete line 11.

11. Is line 6 at least 6 times line 1? (Yes/No) _____.

Alternative II

1. Amount of annual aggregate liability coverage to be demonstrated \$ _____.

2. Current bond rating of most recent issuance and name of rating service _____.

3. Date of issuance of bond _____.

4. Date of maturity of bond _____.

*5. Tangible net worth \$ _____.

*6. Total assets in U.S. (required only if less than 90% of assets are located in the U.S.) \$ _____.

7. Is line 5 at least \$10 million? (Yes/No) _____.

8. Is line 5 at least 6 times line 1? _____.

9. Are at least 90% of assets located in the U.S.? If not, complete line 10. (Yes/No) _____.

10. Is line 6 at least 6 times line 1? _____.

(Fill in part B if you are using the financial test to demonstrate assurance of both liability coverage and closure or post-closure care.)

Part B. Closure or Post-Closure Care and Liability Coverage

(Fill in Alternative I if the criteria of Subsection R315-264-143(f)(1)(i) or Subsection R315-264-145(f)(1)(i) and of Subsection R315-264-147(f)(1)(i) are used or if the criteria of

40 CFR 265.143(e)(1)(i) or 145(e)(1)(i), which are adopted by reference, and of 40 CFR 265.147(f)(1)(i), which is adopted by reference, are used. Fill in Alternative II if the criteria of Subsection R315-264-143(f)(1)(ii) or Subsection R315-264-145(f)(1)(ii) and of Subsection R315-264-147(f)(1)(ii) are used or if the criteria of 40 CFR 265.143(e)(1)(i) or 145(e)(1)(i), which are adopted by reference, and of 40 CFR 265.147(f)(1)(ii), which is adopted by reference, are used.)

Alternative I

1. Sum of current closure and post-closure cost estimates (total of all cost estimates listed above) \$ _____
2. Amount of annual aggregate liability coverage to be demonstrated \$ _____
3. Sum of lines 1 and 2 \$ _____
- *4. Total liabilities (if any portion of your closure or post-closure cost estimates is included in your total liabilities, you may deduct that portion from this line and add that amount to lines 5 and 6) \$ _____
- *5. Tangible net worth \$ _____
- *6. Net worth \$ _____
- *7. Current assets \$ _____
- *8. Current liabilities \$ _____
9. Net working capital (line 7 minus line 8) \$ _____
- *10. The sum of net income plus depreciation, depletion, and amortization \$ _____
- *11. Total assets in U.S. (required only if less than 90% of assets are located in the U.S.) \$ _____
12. Is line 5 at least \$10 million? (Yes/No)
13. Is line 5 at least 6 times line 3? (Yes/No)
14. Is line 9 at least 6 times line 3? (Yes/No)
- *15. Are at least 90% of assets located in the U.S.? (Yes/No) If not, complete line 16.
16. Is line 11 at least 6 times line 3? (Yes/No)
17. Is line 4 divided by line 6 less than 2.0? (Yes/No)
18. Is line 10 divided by line 4 greater than 0.1? (Yes/No)
19. Is line 7 divided by line 8 greater than 1.5? (Yes/No)

Alternative II

1. Sum of current closure and post-closure cost estimates (total of all cost estimates listed above) \$ _____
2. Amount of annual aggregate liability coverage to be demonstrated \$ _____
3. Sum of lines 1 and 2 \$ _____
4. Current bond rating of most recent issuance and name of rating service _____
5. Date of issuance of bond _____
6. Date of maturity of bond _____
- *7. Tangible net worth (if any portion of the closure or post-closure cost estimates is included in "total liabilities" on your financial statements you may add that portion to this line) \$ _____
- *8. Total assets in the U.S. (required only if less than 90% of assets are located in the U.S.) \$ _____
9. Is line 7 at least \$10 million? (Yes/No)
10. Is line 7 at least 6 times line 3? (Yes/No)
- *11. Are at least 90% of assets located in the U.S.? (Yes/No) If not complete line 12.
12. Is line 8 at least 6 times line 3? (Yes/No)

I hereby certify that the wording of this letter is identical to the wording specified in Subsection R315-264-151(g) as such regulations were constituted on the date shown immediately below.

(Signature)
 (Name)
 (Title)
 (Date)

(h)(1) A corporate guarantee, as specified in Subsection R315-264-143(f) or 145(f), or 40 CFR 265.143(e) or 145(e), which are adopted by reference, shall be worded as follows, except that instructions in parentheses, (), are to be replaced

with the relevant information and the parentheses deleted:

Corporate Guarantee for Closure or Post-Closure Care
 Guarantee made this (date) by (name of guaranteeing entity), a business corporation organized under the laws of the State of (insert name of State), herein referred to as guarantor. This guarantee is made on behalf of the (owner or operator) of (business address), which is (one of the following: "our subsidiary"; "a subsidiary of (name and address of common parent corporation), of which guarantor is a subsidiary"; or "an entity with which guarantor has a substantial business relationship, as defined in (either Subsection R315-264-141(h) or 40 CFR 265.141(h), which is adopted by reference,)" to the Director of the Utah Division of Waste Management and Radiation Control (Director).

Recitals

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in Subsections R315-264-143(f) and 145(f) or 40 CFR 265.143(e) and 145(e), which are adopted by reference.

2. (Owner or operator) owns or operates the following hazardous waste management facility(ies) covered by this guarantee: (List for each facility: EPA Identification Number, name, and address. Indicate for each whether guarantee is for closure, post-closure care, or both.)

3. "Closure plans" and "post-closure plans" as used below refer to the plans maintained as required by Sections R315-264-110 through 120 and 40 CFR 265.110 through 120, which are adopted by reference, for the closure and post-closure care of facilities as identified above.

4. For value received from (owner or operator), guarantor guarantees to the Director that in the event that (owner or operator) fails to perform (insert "closure," "post-closure care" or "closure and post-closure care") of the above facility(ies) in accordance with the closure or post-closure plans and other permit or interim status requirements whenever required to do so, the guarantor shall do so or establish a trust fund as specified in Sections R315-264-140 through 148 or 40 CFR 265.140 through 148, which are adopted by reference, as applicable, in the name of (owner or operator) in the amount of the current closure or post-closure cost estimates as specified in Sections R315-264-140 through 148 or 40 CFR 265.140 through 148, which are adopted by reference.

5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within 90 days, by certified mail, notice to the Director and to (owner or operator) that he intends to provide alternate financial assurance as specified in Sections R315-264-140 through 148 or 40 CFR 265.140 through 148, which are adopted by reference, as applicable, in the name of (owner or operator). Within 120 days after the end of such fiscal year, the guarantor shall establish such financial assurance unless (owner or operator) has done so.

6. The guarantor agrees to notify the Director and the appropriate Regional Administrator by certified mail, of a voluntary or involuntary proceeding under Title 11, Bankruptcy, U.S. Code, naming guarantor as debtor, within 10 days after commencement of the proceeding.

7. Guarantor agrees that within 30 days after being notified by the Director of a determination that guarantor no longer meets the financial test criteria or that he is disallowed from continuing as a guarantor of closure or post-closure care, he shall establish alternate financial assurance as specified in Sections R315-264-140 through 148 or 40 CFR 265.140 through 148, which are adopted by reference, as applicable, in the name of (owner or operator) unless (owner or operator) has done so.

8. Guarantor agrees to remain bound under this guarantee notwithstanding any or all of the following: amendment or

modification of the closure or post-closure plan, amendment or modification of the permit, the extension or reduction of the time of performance of closure or post-closure, or any other modification or alteration of an obligation of the owner or operator pursuant to Rules R315-264 or 265.

9. Guarantor agrees to remain bound under this guarantee for as long as (owner or operator) shall comply with the applicable financial assurance requirements of Sections R315-264-140 through 148 or 40 CFR 265.140 through 148, which are adopted by reference, for the above-listed facilities, except as provided in paragraph 10 of this agreement.

10. (Insert the following language if the guarantor is (a) a direct or higher-tier corporate parent, or (b) a firm whose parent corporation is also the parent corporation of the owner or operator):

Guarantor may terminate this guarantee by sending notice by certified mail to the Director and to (owner or operator) and to the appropriate Regional Administrator, provided that this guarantee may not be terminated unless and until (the owner or operator) obtains, and the Director approves, alternate closure and/or post-closure care coverage complying with Sections R315-264-143 and/or 264-145, or 40 CFR 265.143, and/or 145, which are adopted by reference.

(Insert the following language if the guarantor is a firm qualifying as a guarantor due to its "substantial business relationship" with its owner or operator)

Guarantor may terminate this guarantee 120 days following the receipt of notification, through certified mail, by the Director and by (the owner or operator).

11. Guarantor agrees that if (owner or operator) fails to provide alternate financial assurance as specified in Sections R315-264-140 through 148 or 40 CFR 265.140 through 148, which are adopted by reference, as applicable, and obtain written approval of such assurance from the Director within 90 days after a notice of cancellation by the guarantor is received by the Director from guarantor, guarantor shall provide such alternate financial assurance in the name of (owner or operator).

12. Guarantor expressly waives notice of acceptance of this guarantee by the Director or by (owner or operator). Guarantor also expressly waives notice of amendments or modifications of the closure and/or post-closure plan and of amendments or modifications of the facility permit(s).

I hereby certify that the wording of this guarantee is identical to the wording specified in Subsection R315-264-151(h) as such regulations were constituted on the date first above written.

Effective date:

(Name of guarantor)

(Authorized signature for guarantor)

(Name of person signing)

(Title of person signing)

Signature of witness or notary:

(2) A guarantee, as specified in Subsection R315-264-147(g) or 40 CFR 265.147(g), which is adopted by reference, shall be worded as follows, except that instructions in parentheses, (), are to be replaced with the relevant information and the parentheses deleted:

Guarantee for Liability Coverage

Guarantee made this (date) by (name of guaranteeing entity), a business corporation organized under the laws of (if incorporated within the United States insert "the State of _____" and insert name of State; if incorporated outside the United States insert the name of the country in which incorporated, the principal place of business within the United States, and the name and address of the registered agent in the State of the principal place of business), herein referred to as guarantor. This guarantee is made on behalf of (owner or operator) of (business address), which is one of the following: "our subsidiary;" "a subsidiary of (name and address of common

parent corporation), of which guarantor is a subsidiary;" or "an entity with which guarantor has a substantial business relationship, as defined in (either Subsection R315-264-141(h) or 40 CFR 265.141(h), which is adopted by reference)," to any and all third parties who have sustained or may sustain bodily injury or property damage caused by (sudden and/or nonsudden) accidental occurrences arising from operation of the facility(ies) covered by this guarantee.

Recitals

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in Subsection R315-264-147(g) and 40 CFR 265.147(g), which is adopted by reference.

2. (Owner or operator) owns or operates the following hazardous waste management facility(ies) covered by this guarantee: (List for each facility: EPA identification number, name, and address; and if guarantor is incorporated outside the United States list the name and address of the guarantor's registered agent in each State.) This corporate guarantee satisfies the third-party liability requirements for (insert "sudden" or "nonsudden" or "both sudden and nonsudden") accidental occurrences in above-named owner or operator facilities for coverage in the amount of (insert dollar amount) for each occurrence and (insert dollar amount) annual aggregate.

3. For value received from (owner or operator), guarantor guarantees to any and all third parties who have sustained or may sustain bodily injury or property damage caused by (sudden and/or nonsudden) accidental occurrences arising from operations of the facility(ies) covered by this guarantee that in the event that (owner or operator) fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by (sudden and/or nonsudden) accidental occurrences, arising from the operation of the above-named facilities, or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor shall satisfy such judgment(s), award(s) or settlement agreement(s) up to the limits of coverage identified above.

4. Such obligation does not apply to any of the following:

(a) Bodily injury or property damage for which (insert owner or operator) is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that (insert owner or operator) would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of (insert owner or operator) under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of (insert owner or operator) arising from, and in the course of, employment by (insert owner or operator); or

(2) The spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by (insert owner or operator). This exclusion applies:

(A) Whether (insert owner or operator) may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who shall pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by (insert owner or operator);

(2) Premises that are sold, given away or abandoned by (insert owner or operator) if the property damage arises out of

any part of those premises;

(3) Property loaned to (insert owner or operator);

(4) Personal property in the care, custody or control of (insert owner or operator);

(5) That particular part of real property on which (insert owner or operator) or any contractors or subcontractors working directly or indirectly on behalf of (insert owner or operator) are performing operations, if the property damage arises out of these operations.

5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within 90 days, by certified mail, notice to the Director and to (owner or operator) and to the appropriate Regional Administrator that he intends to provide alternate liability coverage as specified in Section R315-264-147 and 40 CFR 265.147, which is adopted by reference, as applicable, in the name of (owner or operator). Within 120 days after the end of such fiscal year, the guarantor shall establish such liability coverage unless (owner or operator) has done so.

6. The guarantor agrees to notify the Director and the appropriate Regional Administrator by certified mail of a voluntary or involuntary proceeding under title 11, Bankruptcy, U.S. Code, naming guarantor as debtor, within 10 days after commencement of the proceeding.

7. Guarantor agrees that within 30 days after being notified by the Director of a determination that guarantor no longer meets the financial test criteria or that he is disallowed from continuing as a guarantor, he shall establish alternate liability coverage as specified in Section R315-264-147 or 40 CFR 265.147, which is adopted by reference, in the name of (owner or operator), unless (owner or operator) has done so.

8. Guarantor reserves the right to modify this agreement to take into account amendment or modification of the liability requirements set by Section R315-264-147 and 40 CFR 265.147, which is adopted by reference, provided that such modification shall become effective only if the Director does not disapprove the modification within 30 days of receipt of notification of the modification.

9. Guarantor agrees to remain bound under this guarantee for so long as (owner or operator) shall comply with the applicable requirements of Sections R315-264-147 and 40 CFR 265.147, which is adopted by reference, for the above-listed facility(ies), except as provided in paragraph 10 of this agreement.

10. (Insert the following language if the guarantor is (a) a direct or higher-tier corporate parent, or (b) a firm whose parent corporation is also the parent corporation of the owner or operator):

Guarantor may terminate this guarantee by sending notice by certified mail to the Director and to (owner or operator) and to the appropriate Regional Administrator, provided that this guarantee may not be terminated unless and until (the owner or operator) obtains, and the Director approves, alternate liability coverage complying with Sections R315-264-147 and/or 40 CFR 265.147, which is adopted by reference.

(Insert the following language if the guarantor is a firm qualifying as a guarantor due to its "substantial business relationship" with the owner or operator):

Guarantor may terminate this guarantee 120 days following receipt of notification, through certified mail, by the Director and by (the owner or operator).

11. Guarantor hereby expressly waives notice of acceptance of this guarantee by any party.

12. Guarantor agrees that this guarantee is in addition to and does not affect any other responsibility or liability of the guarantor with respect to the covered facilities.

13. The Guarantor shall satisfy a third-party liability claim only on receipt of one of the following documents:

(a) Certification from the Principal and the third-party claimant(s) that the liability claim should be paid. The certification shall be worded as follows, except that instructions in parentheses, (), are to be replaced with the relevant information and the parentheses deleted:

Certification of Valid Claim

The undersigned, as parties (insert Principal) and (insert name and address of third-party claimant(s)), hereby certify that the claim of bodily injury and/or property damage caused by a (sudden or nonsudden) accidental occurrence arising from operating (Principal's) hazardous waste treatment, storage, or disposal facility should be paid in the amount of \$

(Signatures)

Principal

(Notary) Date

(Signatures)

Claimant(s)

(Notary) Date

(b) A valid final court order establishing a judgment against the Principal for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Principal's facility or group of facilities.

14. In the event of combination of this guarantee with another mechanism to meet liability requirements, this guarantee shall be considered (insert "primary" or "excess") coverage.

I hereby certify that the wording of the guarantee is identical to the wording specified in Subsection R315-264-151(h)(2) as such regulations were constituted on the date shown immediately below.

Effective date:

(Name of guarantor)

(Authorized signature for guarantor)

(Name of person signing)

(Title of person signing)

Signature of witness or notary:

(i) A hazardous waste facility liability endorsement as required in Section R315-264-147 or 40 CFR 265.147, which is adopted by reference, shall be worded as follows, except that instructions in parentheses, (), are to be replaced with the relevant information and the parentheses deleted:

Hazardous Waste Facility Liability Endorsement

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering bodily injury and property damage in connection with the insured's obligation to demonstrate financial responsibility under Sections R315-264-147 or 40 CFR 265.147, which is adopted by reference. The coverage applies at (list EPA Identification Number, name, and address for each facility) for (insert "sudden accidental occurrences," "nonsudden accidental occurrences," or "sudden and nonsudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences, and which are insured for both). The limits of liability are (insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's liability), exclusive of legal defense costs.

2. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions of the policy inconsistent with subsections (a) through (e) of this Paragraph 2 are hereby amended to conform with subsections (a) through (e):

(a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy to which this endorsement is attached.

(b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of

reimbursement by the insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in Subsections R315-264-147(f) or 40 CFR 265.147(f), which is adopted by reference.

(c) Whenever requested by the Director of the Utah Division of Waste Management and Radiation Control (Director), the Insurer agrees to furnish to the Director a signed duplicate original of the policy and all endorsements.

(d) Cancellation of this endorsement, whether by the Insurer, the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the hazardous waste management facility, shall be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the Director and by the appropriate Regional Administrator.

(e) Any other termination of this endorsement shall be effective only upon written notice and only after the expiration of thirty (30) days after a copy of such written notice is received by the Director.

Attached to and forming part of policy No. ___ issued by (name of Insurer), herein called the Insurer, of (address of Insurer) to (name of insured) of (address) this ___ day of ___, 19___. The effective date of said policy is ___ day of ___, 19___.

I hereby certify that the wording of this endorsement is identical to the wording specified in Subsection R315-264-151(i) as such regulation was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

(Signature of Authorized Representative of Insurer)
(Type name)
(Title), Authorized Representative of (name of Insurer)
(Address of Representative)

(j) A certificate of liability insurance as required in Section R315-264-147 or 40 CFR 265.147, which is adopted by reference, shall be worded as follows, except that the instructions in parentheses, (), are to be replaced with the relevant information and the parentheses deleted:

Hazardous Waste Facility Certificate of Liability Insurance

1. (Name of Insurer), (the "Insurer"), of (address of Insurer) hereby certifies that it has issued liability insurance covering bodily injury and property damage to (name of insured), (the "insured"), of (address of insured) in connection with the insured's obligation to demonstrate financial responsibility under Sections R315-264-147 or 40 CFR 265.147, which is adopted by reference. The coverage applies at (list EPA Identification Number, name, and address for each facility) for (insert "sudden accidental occurrences," "nonsudden accidental occurrences," or "sudden and nonsudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences, and which are insured for both). The limits of liability are (insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's liability), exclusive of legal defense costs. The coverage is provided under policy number ___, issued on (date). The effective date of said policy is (date).

2. The Insurer further certifies the following with respect to the insurance described in Paragraph 1:

(a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy.

(b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the

Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in Subsection R315-264-147(f) or 40 CFR 265.147(f), which is adopted by reference.

(c) Whenever requested by the Director of the Utah Division of Waste Management and Radiation Control, the Insurer agrees to furnish to the Director a signed duplicate original of the policy and all endorsements.

(d) Cancellation of the insurance, whether by the insurer, the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the hazardous waste management facility, shall be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the Director and by the appropriate Regional Administrator.

(e) Any other termination of the insurance shall be effective only upon written notice and only after the expiration of thirty (30) days after a copy of such written notice is received by the Director.

I hereby certify that the wording of this instrument is identical to the wording specified in Subsection R315-264-151(j) as such regulation was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

(Signature of authorized representative of Insurer)
(Type name)
(Title), Authorized Representative of (name of Insurer)
(Address of Representative)

(k) A letter of credit, as specified in Subsection R315-264-147(h) or 40 CFR 265.147(h), which is adopted by reference, shall be worded as follows, except that instructions in parentheses, (), are to be replaced with the relevant information and the parentheses deleted:

Irrevocable Standby Letter of Credit
Director, Utah Division of Waste Management and Radiation Control
195 North 1950 West
P.O. Box 144880
Salt Lake City, UT 84114-4880

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. _____ in the favor of ("any and all third-party liability claimants" or insert name of trustee of the standby trust fund), at the request and for the account of (owner or operator's name and address) for third-party liability awards or settlements up to (in words) U.S. dollars \$_____ per occurrence and the annual aggregate amount of (in words) U.S. dollars \$_____, for sudden accidental occurrences and/or for third-party liability awards or settlements up to the amount of (in words) U.S. dollars \$_____ per occurrence, and the annual aggregate amount of (in words) U.S. dollars \$_____, for nonsudden accidental occurrences available upon presentation of a sight draft bearing reference to this letter of credit No. _____, and (insert the following language if the letter of credit is being used without a standby trust fund: (1) a signed certificate reading as follows:

Certificate of Valid Claim
The undersigned, as parties (insert principal) and (insert name and address of third party claimant(s)), hereby certify that the claim of bodily injury and/or property damage caused by a (sudden or nonsudden) accidental occurrence arising from operations of (principal's) hazardous waste treatment, storage, or disposal facility should be paid in the amount of \$(_____). We hereby certify that the claim does not apply to any of the following:

(a) Bodily injury or property damage for which (insert principal) is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This

exclusion does not apply to liability for damages that (insert principal) would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of (insert principal) under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of (insert principal) arising from, and in the course of, employment by (insert principal); or

(2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by (insert principal).

This exclusion applies:

(A) Whether (insert principal) may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who shall pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by (insert principal);

(2) Premises that are sold, given away or abandoned by (insert principal) if the property damage arises out of any part of those premises;

(3) Property loaned to (insert principal);

(4) Personal property in the care, custody or control of (insert principal);

(5) That particular part of real property on which (insert principal) or any contractors or subcontractors working directly or indirectly on behalf of (insert principal) are performing operations, if the property damage arises out of these operations.

(Signatures)

Grantor

(Signatures)

Claimant(s) or

(2) a valid final court order establishing a judgment against the Grantor for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Grantor's facility or group of facilities.)

This letter of credit is effective as of (date) and shall expire on (date at least one year later), but such expiration date shall be automatically extended for a period of (at least one year) on (date and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify you, the Director of the Utah Division of Waste Management and Radiation Control, and (owner's or operator's name) and the appropriate Regional Administrator by certified mail that we have decided not to extend this letter of credit beyond the current expiration date.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us.

(Insert the following language if a standby trust fund is not being used: "In the event that this letter of credit is used in combination with another mechanism for liability coverage, this letter of credit shall be considered (insert "primary" or "excess" coverage)."

We certify that the wording of this letter of credit is identical to the wording specified in Subsection R315-264-151(k) as such regulations were constituted on the date shown immediately below. (Signature(s) and title(s) of official(s) of issuing institution) (Date).

This credit is subject to (insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published and copyrighted by the International Chamber of Commerce," or "the Uniform Commercial Code").

(l) A surety bond, as specified in Subsection R315-264-147(i) or 40 CFR 265.147(i), which is adopted by reference, shall be worded as follows: except that instructions in parentheses, (), are to be replaced with the relevant information and the parentheses deleted:

Payment Bond

Surety Bond No. (Insert number)

Parties (Insert name and address of owner or operator), Principal, incorporated in (Insert State of incorporation) of (Insert city and State of principal place of business) and (Insert name and address of surety company(ies)), Surety Company(ies), of (Insert surety(ies) place of business).

EPA Identification Number, name, and address for each facility guaranteed by this bond: _____

	Table	
	Sudden accidental occurrences	Nonsudden accidental occurrences
Penal Sum Per Occurrence	(insert amount)	(insert amount)
Annual Aggregate	(insert amount)	(insert amount)

Purpose: This is an agreement between the Surety(ies) and the Principal under which the Surety(ies), its(their) successors and assignees, agree to be responsible for the payment of claims against the Principal for bodily injury and/or property damage to third parties caused by ("sudden" and/or "nonsudden") accidental occurrences arising from operations of the facility or group of facilities in the sums prescribed herein; subject to the governing provisions and the following conditions.

Governing Provisions:

(1) Section 3004 of the Resource Conservation and Recovery Act of 1976, as amended.

(2) Rules adopted by the Utah Waste Management and Radiation Control Board under the Utah Solid and Hazardous Waste Act, particularly ("Subsection R315-264-147" or "40 CFR 265.147, which is adopted by reference,") (if applicable).

Conditions:

(1) The Principal is subject to the applicable governing provisions that require the Principal to have and maintain liability coverage for bodily injury and property damage to third parties caused by ("sudden" and/or "nonsudden") accidental occurrences arising from operations of the facility or group of facilities. Such obligation does not apply to any of the following:

(a) Bodily injury or property damage for which (insert principal) is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that (insert principal) would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of (insert principal) under a workers' compensation, disability benefits, or unemployment compensation law or similar law.

(c) Bodily injury to:

(1) An employee of (insert principal) arising from, and in the course of, employment by (insert principal); or

(2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by (insert principal). This exclusion applies:

(A) Whether (insert principal) may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who shall pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by (insert principal);

(2) Premises that are sold, given away or abandoned by (insert principal) if the property damage arises out of any part of those premises;

(3) Property loaned to (insert principal);

(4) Personal property in the care, custody or control of (insert principal);

(5) That particular part of real property on which (insert principal) or any contractors or subcontractors working directly or indirectly on behalf of (insert principal) are performing operations, if the property damage arises out of these operations.

(2) This bond assures that the Principal shall satisfy valid third party liability claims, as described in condition 1.

(3) If the Principal fails to satisfy a valid third party liability claim, as described above, the Surety(ies) becomes liable on this bond obligation.

(4) The Surety(ies) shall satisfy a third party liability claim only upon the receipt of one of the following documents:

(a) Certification from the Principal and the third party claimant(s) that the liability claim should be paid. The certification shall be worded as follows, except that instructions in parentheses, (), are to be replaced with the relevant information and the parentheses deleted:

Certification of Valid Claim

The undersigned, as parties (insert name of Principal) and (insert name and address of third party claimant(s)), hereby certify that the claim of bodily injury and/or property damage caused by a (sudden or nonsudden) accidental occurrence arising from operating (Principal's) hazardous waste treatment, storage, or disposal facility should be paid in the amount of \$().

(Signature)

Principal

(Notary) Date

(Signature(s))

Claimant(s)

(Notary) Date

or (b) A valid final court order establishing a judgment against the Principal for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Principal's facility or group of facilities.

(5) In the event of combination of this bond with another mechanism for liability coverage, this bond shall be considered (insert "primary" or "excess") coverage.

(6) The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond. In no event shall the obligation of the Surety(ies) hereunder exceed the amount of said annual aggregate penal sum, provided that the Surety(ies) furnish(es) notice to the Director forthwith of all claims filed and payments made by the Surety(ies) under this bond.

(7) The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and the Director and the appropriate Regional Administrator, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by the Principal and the Director, as evidenced by the return receipt.

(8) The Principal may terminate this bond by sending written notice to the Surety(ies) and to the Director.

(9) The Surety(ies) hereby waive(s) notification of amendments to applicable laws, statutes, rules and regulations and agree(s) that no such amendment shall in any way alleviate its (their) obligation on this bond.

(10) This bond is effective from (insert date) (12:01 a.m., standard time, at the address of the Principal as stated herein) and shall continue in force until terminated as described above.

In Witness Whereof, the Principal and Surety(ies) have executed this Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in Subsection R315-264-151(1), as such regulations were constituted on the date this bond was executed.

PRINCIPAL

(Signature(s))

(Name(s))

(Title(s))

(Corporate Seal)

CORPORATE SURETY(IES)

(Name and address)

State of incorporation:

Liability Limit: \$

(Signature(s))

(Name(s) and title(s))

(Corporate seal)

(For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.)

Bond premium: \$

(m)(1) A trust agreement, as specified in Subsection R315-264-147(j) or 40 CFR 265.147(j), which is adopted by reference, shall be worded as follows, except that instructions in parentheses, (), are to be replaced with the relevant information and the parentheses deleted:

Trust Agreement

Trust Agreement, the "Agreement," entered into as of (date) by and between (name of the owner or operator) a (name of State) (insert "corporation," "partnership," "association," or "proprietorship"), the "Grantor," and (name of corporate trustee), (insert, "incorporated in the State of ____" or "a national bank"), the "trustee."

Whereas, the Utah Waste Management and Radiation Control Board, has established certain regulations applicable to the Grantor, requiring that an owner or operator of a hazardous waste management facility or group of facilities shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental and/or nonsudden accidental occurrences arising from operations of the facility or group of facilities.

Whereas, the Grantor has elected to establish a trust to assure all or part of such financial responsibility for the facilities identified herein.

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee.

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term "Board", "Waste Management and Radiation Control Board" created pursuant to Utah Code Annotated 19-1-106.

(b) The term "Director" means the Director, of the Division of Waste Management and Radiation Control his successors, designees, and any subsequent entity of the State of Utah upon whom the duties of regulation and enforcement of regulations governing hazardous waste.

(c) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(d) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of Facilities. This agreement pertains to the facilities identified on attached schedule A (on schedule A, for each facility list the EPA Identification Number,

name, and address of the facility(ies) and the amount of liability coverage, or portions thereof, if more than one instrument affords combined coverage as demonstrated by this Agreement).

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund, hereinafter the "Fund," for the benefit of any and all third parties injured or damaged by (sudden and/or nonsudden) accidental occurrences arising from operation of the facility(ies) covered by this guarantee, in the amounts of _____ (up to \$1 million) per occurrence and _____ (up to \$2 million) annual aggregate for sudden accidental occurrences and _____ (up to \$3 million) per occurrence and _____ (up to \$6 million) annual aggregate for nonsudden occurrences, except that the Fund is not established for the benefit of third parties for the following:

(a) Bodily injury or property damage for which (insert Grantor) is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that (insert Grantor) would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of (insert Grantor) under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of (insert Grantor) arising from, and in the course of, employment by (insert Grantor); or

(2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by (insert Grantor).

This exclusion applies:

(A) Whether (insert Grantor) may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who shall pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by (insert Grantor);

(2) Premises that are sold, given away or abandoned by (insert Grantor) if the property damage arises out of any part of those premises;

(3) Property loaned to (insert Grantor);

(4) Personal property in the care, custody or control of (insert Grantor);

(5) That particular part of real property on which (insert Grantor) or any contractors or subcontractors working directly or indirectly on behalf of (insert Grantor) are performing operations, if the property damage arises out of these operations.

In the event of combination with another mechanism for liability coverage, the fund shall be considered (insert "primary" or "excess") coverage.

The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by Director.

Section 4. Payment for Bodily Injury or Property Damage. The Trustee shall satisfy a third party liability claim by making payments from the Fund only upon receipt of one of the

following documents;

(a) Certification from the Grantor and the third party claimant(s) that the liability claim should be paid. The certification shall be worded as follows, except that instructions in parentheses, (), are to be replaced with the relevant information and the parentheses deleted:

Certification of Valid Claim

The undersigned, as parties (insert Grantor) and (insert name and address of third party claimant(s)), hereby certify that the claim of bodily injury and/or property damage caused by a (sudden or nonsudden) accidental occurrence arising from operating (Grantor's) hazardous waste treatment, storage, or disposal facility should be paid in the amount of \$(_____).

(Signatures)

Grantor

(Signatures)

Claimant(s)

(b) A valid final court order establishing a judgment against the Grantor for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Grantor's facility or group of facilities.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee shall invest and reinvest the principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions Section R315-264-151. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstance then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held unless they are securities or other obligations of the Federal or a State government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common commingled, or collective trust fund created by the Trustee in which the fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 81a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the

application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuations. The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the Director a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the Director shall constitute a conclusively binding assent by the Grantor barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor

trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the Director, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendments to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the Director to the Trustee shall be in writing, signed by the Director and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the Director hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the Director, except as provided for herein.

Section 15. Notice of Nonpayment. If a payment for bodily injury or property damage is made under Section 4 of this trust, the Trustee shall notify the Grantor of such payment and the amount(s) thereof within five (5) working days. The Grantor shall, on or before the anniversary date of the establishment of the Fund following such notice, either make payments to the Trustee in amounts sufficient to cause the trust to return to its value immediately prior to the payment of claims under Section 4, or shall provide written proof to the Trustee that other financial assurance for liability coverage has been obtained equalling the amount necessary to return the trust to its value prior to the payment of claims. If the Grantor does not either make payments to the Trustee or provide the Trustee with such proof, the Trustee shall within 10 working days after the anniversary date of the establishment of the Fund provide a written notice of nonpayment to the Director and to the appropriate Regional Administrator.

Section 16. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the Director, or by the Trustee and the Director if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the Director, or by the Trustee and the Director, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

The Director shall agree to termination of the Trust when the owner or operator substitutes alternate financial assurance as specified in this section.

Section 18. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the Director issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of

the State of Utah.

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in Subsection R315-264-151(m) as such regulations were constituted on the date first above written.

(Signature of Grantor)

(Title)

Attest:

(Title)

(Seal)

(Signature of Trustee)

Attest:

(Title)

(Seal)

(2) The following is an example of the certification of acknowledgement which shall accompany the trust agreement for a trust fund as specified in Subsection R315-264-147(j) or 40 CFR 265.147(j), which is adopted by reference.

State of _____

County of _____

On this (date), before me personally came (owner or operator) to me known, who, being by me duly sworn, did depose and say that she/he resides at (address), that she/he is (title) of (corporation), the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

(Signature of Notary Public)

(n)(1) A standby trust agreement, as specified in Subsection R315-264-147(h) or 40 CFR 265.147(h), which is adopted by reference, shall be worded as follows, except that instructions in parentheses, (), are to be replaced with the relevant information and the parentheses deleted:

Standby Trust Agreement

Trust Agreement, the "Agreement," entered into as of (date) by and between (name of the owner or operator) a (name of a State) (insert "corporation," "partnership," "association," or "proprietorship"), the "Grantor," and (name of corporate trustee), (insert, "incorporated in the State of _____" or "a national bank"), the "trustee."

Whereas the Utah Waste Management and Radiation Control Board, in accordance with the Utah Solid and Hazardous Waste Act, has established certain regulations applicable to the Grantor, requiring that an owner or operator of a hazardous waste management facility or group of facilities shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental and/or nonsudden accidental occurrences arising from operations of the facility or group of facilities.

Whereas, the Grantor has elected to establish a standby trust into which the proceeds from a letter of credit may be deposited to assure all or part of such financial responsibility for the facilities identified herein.

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee.

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term "Board", "Waste Management and Radiation Control Board" created pursuant to Utah Code Annotated 19-1-106.

(b) The term "Director" means the Director, of the Division of Waste Management and Radiation Control his successors, designees, and any subsequent entity of the State of Utah upon whom the duties of regulation and enforcement of regulations governing hazardous waste.

(c) The term Grantor means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(d) The term Trustee means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of Facilities. This agreement pertains to the facilities identified on attached schedule A (on schedule A, for each facility list the EPA Identification Number, name, and address of the facility(ies) and the amount of liability coverage, or portions thereof, if more than one instrument affords combined coverage as demonstrated by this Agreement).

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a standby trust fund, hereafter the "Fund," for the benefit of any and all third parties injured or damaged by (sudden and/or nonsudden) accidental occurrences arising from operation of the facility(ies) covered by this guarantee, in the amounts of _____ (up to \$1 million) per occurrence and _____ (up to \$2 million) annual aggregate for sudden accidental occurrences and _____ (up to \$3 million) per occurrence and _____ (up to \$6 million) annual aggregate for nonsudden occurrences, except that the Fund is not established for the benefit of third parties for the following:

(a) Bodily injury or property damage for which (insert Grantor) is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that (insert Grantor) would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of (insert Grantor) under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of (insert Grantor) arising from , and in the course of, employment by (insert Grantor); or

(2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by (insert Grantor).

This exclusion applies:

(A) Whether (insert Grantor) may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who shall pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by (insert Grantor);

(2) Premises that are sold, given away or abandoned by (insert Grantor) if the property damage arises out of any part of those premises;

(3) Property loaned by (insert Grantor);

(4) Personal property in the care, custody or control of (insert Grantor);

(5) That particular part of real property on which (insert Grantor) or any contractors or subcontractors working directly or indirectly on behalf of (insert Grantor) are performing operations, if the property damage arises out of these operations.

In the event of combination with another mechanism for liability coverage, the fund shall be considered (insert "primary")

or "excess") coverage.

The Fund is established initially as consisting of the proceeds of the letter of credit deposited into the Fund. Such proceeds and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the Director of the Utah Division of Waste Management and Radiation Control.

Section 4. Payment for Bodily Injury or Property Damage. The Trustee shall satisfy a third party liability claim by drawing on the letter of credit described in Schedule B and by making payments from the Fund only upon receipt of one of the following documents:

(a) Certification from the Grantor and the third party claimant(s) that the liability claim should be paid. The certification shall be worded as follows, except that instructions in parentheses, (), are to be replaced with the relevant information and the parentheses deleted:

Certification of Valid Claim

The undersigned, as parties (insert Grantor) and (insert name and address of third party claimant(s)), hereby certify that the claim of bodily injury and/or property damage caused by a (sudden or nonsudden) accidental occurrence arising from operating (Grantor's) hazardous waste treatment, storage, or disposal facility should be paid in the amount of \$().

(Signature)

Grantor

(Signatures)

Claimant(s)

(b) A valid final court order establishing a judgment against the Grantor for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Grantor's facilities.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of the proceeds from the letter of credit drawn upon by the Trustee in accordance with the requirements of Subsection R315-264-151(k) and Section 4 of this Agreement.

Section 6. Trustee Management. The Trustee shall invest and reinvest the principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions Section R315-264-151. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or a State government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve Bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements to the Trustee shall be paid from the Fund.

Section 10. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 11. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 12. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers

and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the Director and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 13. Instructions to the Trustee. All orders, requests, certifications of valid claims, and instructions to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendments to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the Director hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the Director, except as provided for herein.

Section 14. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the Director, or by the Trustee and the Director if the Grantor ceases to exist.

Section 15. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 14, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the Director, or by the Trustee and the Director, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be paid to the Grantor.

The Director shall agree to termination of the Trust when the owner or operator substitutes alternative financial assurance as specified in this section.

Section 16. Immunity and indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor and the Director issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 17. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the State of Utah.

Section 18. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation of the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in Subsection R315-264-151(n) as such regulations were constituted on the date first above written.

(Signature of Grantor)

(Title)

Attest:

(Title)

(Seal)

(Signature of Trustee)

Attest:

(Title)

(Seal)

(2) The following is an example of the certification of acknowledgement which shall accompany the trust agreement for a standby trust fund as specified in Subsection R315-264-147(h) or 40 CFR 265.147(h), which is adopted by reference.

State of
County of

On this (date), before me personally came (owner or operator) to me known, who, being by me duly sworn, did depose and say that she/he resides at (address), that she/he is (title) of (corporation), the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

(Signature of Notary Public)

R315-264-170. Use and Management of Containers -- Applicability.

The regulations in Sections R315-264-170 through 179 apply to owners and operators of all hazardous waste facilities that store containers of hazardous waste, except as Section R315-264-1 provides otherwise.

Under Section R315-261-7 and Subsection R315-261-33(c), if a hazardous waste is emptied from a container the residue remaining in the container is not considered a hazardous waste if the container is "empty" as defined in Section R315-261-7. In that event, management of the container is exempt from the requirements of Sections R315-264-170 through 179.

R315-264-171. Condition of Containers.

If a container holding hazardous waste is not in good condition, e.g., severe rusting, apparent structural defects, or if it begins to leak, the owner or operator shall transfer the hazardous waste from this container to a container that is in good condition or manage the waste in some other way that complies with the requirements of Rule R315-264.

R315-264-172. Compatibility of Waste with Containers.

The owner or operator shall use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

R315-264-173. Management of Containers.

(a) A container holding hazardous waste shall always be closed during storage, except when it is necessary to add or remove waste.

(b) A container holding hazardous waste shall not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

Comment: Reuse of containers in transportation is governed by U.S. Department of Transportation regulations including those set forth in 49 CFR 173.28.

R315-264-174. Inspections.

At least weekly, the owner or operator shall inspect areas where containers are stored. The owner or operator shall look for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors.

See Subsection R315-264-15(c) and Section R315-264-171 for remedial action required if deterioration or leaks are detected.

R315-264-175. Containment.

(a) Container storage areas shall have a containment system that is designed and operated in accordance with Subsection R315-264-175(b), except as otherwise provided by Subsection R315-264-175(c).

(b) A containment system shall be designed and operated as follows:

(1) A base shall underlie the containers which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed;

(2) The base shall be sloped or the containment system shall be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids;

(3) The containment system shall have sufficient capacity to contain 10% of the volume of containers or the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in this determination;

(4) Run-on into the containment system shall be prevented unless the collection system has sufficient excess capacity in addition to that required in Subsection R315-264-175(b)(3) to contain any run-on which might enter the system; and

(5) Spilled or leaked waste and accumulated precipitation shall be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system.

If the collected material is a hazardous waste under Rule R315-261, it shall be managed as a hazardous waste in accordance with all applicable requirements of Rules R315-262 through 266. If the collected material is discharged through a point source to waters of the United States, it is subject to the requirements of section 402 of the Clean Water Act, as amended.

(c) Storage areas that store containers holding only wastes that do not contain free liquids need not have a containment system defined by Subsection R315-264-175(b), except as provided by Subsection R315-264-175(d) or provided that:

(1) The storage area is sloped or is otherwise designed and operated to drain and remove liquid resulting from precipitation, or

(2) The containers are elevated or are otherwise protected from contact with accumulated liquid.

(d) Storage areas that store containers holding the wastes listed below that do not contain free liquids shall have a containment system defined by Subsection R315-264-175(b):

(1) F020, F021, F022, F023, F026 and F027.

R315-264-176. Special Requirements for Ignitable or Reactive Waste.

Containers holding ignitable or reactive waste shall be located at least 15 meters, 50 feet, from the facility's property line. See Subsection R315-264-17(a) for additional requirements.

R315-264-177. Special Requirements for Incompatible Wastes.

(a) Incompatible wastes, or incompatible wastes and materials, see appendix V of Rule R315-264 for examples, shall not be placed in the same container, unless Subsection R35-264-17(b) is complied with.

(b) Hazardous waste shall not be placed in an unwashed container that previously held an incompatible waste or material.

As required by Section R315-264-13, the waste analysis plan shall include analyses needed to comply with Section R315-264-177. Also, Subsection R315-264-17(c) requires waste analyses, trial tests or other documentation to assure compliance with Subsection R315-264-17(b). As required by Section R315-264-73, the owner or operator shall place the results of each waste analysis and trial test, and any documented information, in the operating record of the facility.

(c) A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers, piles, open tanks, or surface impoundments shall be separated from the other materials or protected from them by means of a dike, berm, wall, or other device. The purpose of Section R315-264-177 is to prevent fires, explosions, gaseous emission, leaching, or other discharge of hazardous waste or hazardous waste constituents which could result from the mixing of incompatible wastes or materials if containers break or leak.

R315-264-178. Closure.

At closure, all hazardous waste and hazardous waste residues shall be removed from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues shall be decontaminated or removed. At closure, as throughout the operating period, unless the owner or operator can demonstrate in accordance with Subsection R315-261-3(d) that the solid waste removed from the containment system is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and shall manage it in accordance with all applicable requirements of Rules R315-262 through 266.

R315-264-179. Air Emission Standards.

The owner or operator shall manage all hazardous waste placed in a container in accordance with the applicable requirements of Sections R315-264-1030 through 1036, 1050 through 1065, and 1080 through 1090.

R315-264-190. Tank Systems - Applicability.

The requirements of Sections R315-264-190 through 200 apply to owners and operators of facilities that use tank systems for storing or treating hazardous waste except as otherwise provided in Subsections R315-264-190(a), (b), and (c) or in Section R315-264-1.

(a) Tank systems that are used to store or treat hazardous waste which contains no free liquids and are situated inside a building with an impermeable floor are exempted from the requirements in Section R315-264-193. To demonstrate the absence or presence of free liquids in the stored/treated waste, the following test shall be used: Method 9095B, Paint Filter Liquids Test, as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in R315-260-11.

(b) Tank systems, including sumps, as defined in Section R315-260-10, that serve as part of a secondary containment system to collect or contain releases of hazardous wastes are exempted from the requirements in Subsection R315-264-193(a).

(c) Tanks, sumps, and other such collection devices or systems used in conjunction with drip pads, as defined in Section R315-260-10 and regulated under Sections R315-264-570 through 575, shall meet the requirements of Sections R315-264-190 through 200.

R315-264-191. Assessment of Existing Tank System's Integrity.

(a) For each existing tank system that does not have secondary containment meeting the requirements of Section R315-264-193, the owner or operator shall determine that the

tank system is not leaking or is unfit for use. Except as provided in Subsection R315-264-191(c), the owner or operator shall obtain and keep on file at the facility a written assessment reviewed and certified by a qualified Professional Engineer, in accordance with Subsection R315-270-11(d), that attests to the tank system's integrity.

(b) This assessment shall determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the waste(s) to be stored or treated, to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment shall consider the following:

- (1) Design standard(s), if available, according to which the tank and ancillary equipment were constructed;
- (2) Hazardous characteristics of the waste(s) that have been and will be handled;
- (3) Existing corrosion protection measures;
- (4) Documented age of the tank system, if available (otherwise, an estimate of the age); and
- (5) Results of a leak test, internal inspection, or other tank integrity examination such that:

(i) For non-enterable underground tanks, the assessment shall include a leak test that is capable of taking into account the effects of temperature variations, tank end deflection, vapor pockets, and high water table effects, and

(ii) For other than non-enterable underground tanks and for ancillary equipment, this assessment shall include either a leak test, as described above, or other integrity examination that is certified by a qualified Professional Engineer in accordance with Subsection R315-270-11(d), that addresses cracks, leaks, corrosion, and erosion.

Note: The practices described in the American Petroleum Institute (API) Publication, Guide for Inspection of Refinery Equipment, Chapter XIII, "Atmospheric and Low-Pressure Storage Tanks," 4th edition, 1981, may be used, where applicable, as guidelines in conducting other than a leak test.

(c) Tank systems that store or treat materials that become hazardous wastes subsequent to July 14, 1986, shall conduct this assessment within 12 months after the date that the waste becomes a hazardous waste.

(d) If, as a result of the assessment conducted in accordance with Subsection R315-264-191(a), a tank system is found to be leaking or unfit for use, the owner or operator shall comply with the requirements of Section R315-264-196.

R315-264-192. Design and Installation of New Tank Systems or Components.

(a) Owners or operators of new tank systems or components shall obtain and submit to the Director, at time of submittal of part B information, a written assessment, reviewed and certified by a qualified Professional Engineer, in accordance with Subsection R315-270-11(d), attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. The assessment shall show that the foundation, structural support, seams, connections, and pressure controls, if applicable, are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection to ensure that it will not collapse, rupture, or fail. This assessment, which shall be used by the Director to review and approve or disapprove the acceptability of the tank system design, shall include, at a minimum, the following information:

- (1) Design standard(s) according to which tank(s) and/or the ancillary equipment are constructed;
- (2) Hazardous characteristics of the waste(s) to be handled;
- (3) For new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system will be in contact with the soil or with water, a determination by a corrosion expert of:

(i) Factors affecting the potential for corrosion, including but not limited to:

- (A) Soil moisture content;
- (B) Soil pH;
- (C) Soil sulfides level;
- (D) Soil resistivity;
- (E) Structure to soil potential;
- (F) Influence of nearby underground metal structures, e.g., piping;

(G) Existence of stray electric current;

(H) Existing corrosion-protection measures, e.g., coating, cathodic protection, and

(ii) The type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following:

(A) Corrosion-resistant materials of construction such as special alloys, fiberglass reinforced plastic, etc.;

(B) Corrosion-resistant coating, such as epoxy, fiberglass, etc., with cathodic protection, e.g., impressed current or sacrificial anodes; and

(C) Electrical isolation devices such as insulating joints, flanges, etc.

Note: The practices described in the National Association of Corrosion Engineers (NACE) standard, "Recommended Practice (RP-02-85)-Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," and the American Petroleum Institute (API) Publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems," may be used, where applicable, as guidelines in providing corrosion protection for tank systems.

(4) For underground tank system components that are likely to be adversely affected by vehicular traffic, a determination of design or operational measures that will protect the tank system against potential damage; and

(5) Design considerations to ensure that:

(i) Tank foundations will maintain the load of a full tank;

(ii) Tank systems shall be anchored to prevent flotation or dislodgment where the tank system is placed in a saturated zone, or is located within a seismic fault zone subject to the standards of Subsection R315-264-18(a); and

(iii) Tank systems shall withstand the effects of frost heave.

(b) The owner or operator of a new tank system shall ensure that proper handling procedures are adhered to in order to prevent damage to the system during installation. Prior to covering, enclosing, or placing a new tank system or component in use, an independent, qualified, installation inspector or a qualified Professional Engineer, either of whom is trained and experienced in the proper installation of tanks systems or components, shall inspect the system for the presence of any of the following items:

- (1) Weld breaks;
- (2) Punctures;
- (3) Scrapes of protective coatings;
- (4) Cracks;
- (5) Corrosion;
- (6) Other structural damage or inadequate construction/installation.

All discrepancies shall be remedied before the tank system is covered, enclosed, or placed in use.

(c) New tank systems or components that are placed underground and that are backfilled shall be provided with a backfill material that is a noncorrosive, porous, homogeneous substance and that is installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.

(d) All new tanks and ancillary equipment shall be tested for tightness prior to being covered, enclosed, or placed in use.

If a tank system is found not to be tight, all repairs necessary to remedy the leak(s) in the system shall be performed prior to the tank system being covered, enclosed, or placed into use.

(e) Ancillary equipment shall be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion, or contraction.

Note: The piping system installation procedures described in American Petroleum Institute (API) Publication 1615 (November 1979), "Installation of Underground Petroleum Storage Systems," or ANSI Standard B31.3, "Petroleum Refinery Piping," and ANSI Standard B31.4 "Liquid Petroleum Transportation Piping System," may be used, where applicable, as guidelines for proper installation of piping systems.

(f) The owner or operator shall provide the type and degree of corrosion protection recommended by an independent corrosion expert, based on the information provided under Subsection R315-264-192(a)(3), or other corrosion protection if the Director believes other corrosion protection is necessary to ensure the integrity of the tank system during use of the tank system. The installation of a corrosion protection system that is field fabricated shall be supervised by an independent corrosion expert to ensure proper installation.

(g) The owner or operator shall obtain and keep on file at the facility written statements by those persons required to certify the design of the tank system and supervise the installation of the tank system in accordance with the requirements of Subsections R315-264-192(b) through (f), that attest that the tank system was properly designed and installed and that repairs, pursuant to Subsections R315-264-192(b) and (d), were performed. These written statements shall also include the certification statement as required in Subsection R315-270-11(d).

R315-264-193. Containment and Detection of Releases.

(a) In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of Section R315-264-193 shall be provided, except as provided in Subsections R315-264-193(f) and (g):

(1) For all new and existing tank systems or components, prior to their being put into service.

(2) For tank systems that store or treat materials that become hazardous wastes, within two years of the hazardous waste listing, or when the tank system has reached 15 years of age, whichever comes later.

(b) Secondary containment systems shall be:

(1) Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and

(2) Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

(c) To meet the requirements of Subsection R315-264-193(b), secondary containment systems shall be at a minimum:

(1) Constructed of or lined with materials that are compatible with the wastes(s) to be placed in the tank system and shall have sufficient strength and thickness to prevent failure owing to pressure gradients, including static head and external hydrological forces, physical contact with the waste to which it is exposed, climatic conditions, and the stress of daily operation, including stresses from nearby vehicular traffic.

(2) Placed on a foundation or base capable of providing support to the secondary containment system, resistance to pressure gradients above and below the system, and capable of preventing failure due to settlement, compression, or uplift;

(3) Provided with a leak-detection system that is designed and operated so that it will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the

secondary containment system within 24 hours, or at the earliest practicable time if the owner or operator can demonstrate to the Director that existing detection technologies or site conditions shall not allow detection of a release within 24 hours; and

(4) Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation shall be removed from the secondary containment system within 24 hours, or in as timely a manner as is possible to prevent harm to human health and the environment, if the owner or operator can demonstrate to the Director that removal of the released waste or accumulated precipitation cannot be accomplished within 24 hours.

Note: If the collected material is a hazardous waste under Rule R315-261, it is subject to management as a hazardous waste in accordance with all applicable requirements of Rules R315-262 through 265. If the collected material is discharged through a point source to waters of the United States, it is subject to the requirements of sections 301, 304, and 402 of the Clean Water Act, as amended. If discharged to a Publicly Owned Treatment Works (POTW), it is subject to the requirements of section 307 of the Clean Water Act, as amended. If the collected material is released to the environment, it may be subject to the reporting requirements of 40 CFR part 302.

(d) Secondary containment for tanks shall include one or more of the following devices:

(1) A liner, external to the tank;

(2) A vault;

(3) A double-walled tank; or

(4) An equivalent device as approved by the Director.

(e) In addition to the requirements of Subsections R315-264-193(b), (c), and (d), secondary containment systems shall satisfy the following requirements:

(1) External liner systems shall be:

(i) Designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;

(ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity shall be sufficient to contain precipitation from a 25-year, 24-hour rainfall event.

(iii) Free of cracks or gaps; and

(iv) Designed and installed to surround the tank completely and to cover all surrounding earth likely to come into contact with the waste if the waste is released from the tank(s), i.e., capable of preventing lateral as well as vertical migration of the waste.

(2) Vault systems shall be:

(i) Designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;

(ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity shall be sufficient to contain precipitation from a 25-year, 24-hour rainfall event;

(iii) Constructed with chemical-resistant water stops in place at all joints, if any;

(iv) Provided with an impermeable interior coating or lining that is compatible with the stored waste and that shall prevent migration of waste into the concrete;

(v) Provided with a means to protect against the formation of and ignition of vapors within the vault, if the waste being stored or treated:

(A) Meets the definition of ignitable waste under Section R315-261-21; or

(B) Meets the definition of reactive waste under Section

R315-261-23, and may form an ignitable or explosive vapor; and

(vi) Provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.

(3) Double-walled tanks shall be:

(i) Designed as an integral structure, i.e., an inner tank completely enveloped within an outer shell, so that any release from the inner tank is contained by the outer shell;

(ii) Protected, if constructed of metal, from both corrosion of the primary tank interior and of the external surface of the outer shell; and

(iii) Provided with a built-in continuous leak detection system capable of detecting a release within 24 hours, or at the earliest practicable time, if the owner or operator can demonstrate to the Director, and the Director concludes, that the existing detection technology or site conditions would not allow detection of a release within 24 hours.

Note: The provisions outlined in the Steel Tank Institute's (STI) "Standard for Dual Wall Underground Steel Storage Tanks" may be used as guidelines for aspects of the design of underground steel double-walled tanks.

(f) Ancillary equipment shall be provided with secondary containment, e.g., trench, jacketing, double-walled piping, that meets the requirements of Subsections R315-264-193(b) and (c) except for:

(1) Aboveground piping, exclusive of flanges, joints, valves, and other connections, that are visually inspected for leaks on a daily basis;

(2) Welded flanges, welded joints, and welded connections, that are visually inspected for leaks on a daily basis;

(3) Sealless or magnetic coupling pumps and sealless valves, that are visually inspected for leaks on a daily basis; and

(4) Pressurized aboveground piping systems with automatic shut-off devices, e.g., excess flow check valves, flow metering shutdown devices, loss of pressure actuated shut-off devices, that are visually inspected for leaks on a daily basis.

(g) The owner or operator may obtain a variance from the requirements Section R315-264-193 if the Director finds, as a result of a demonstration by the owner or operator that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous waste or hazardous constituents into the ground water; or surface water at least as effectively as secondary containment during the active life of the tank system or that in the event of a release that does migrate to ground water or surface water, no substantial present or potential hazard will be posed to human health or the environment. New underground tank systems may not, per a demonstration in accordance with Subsection R315-264-193(g)(2), be exempted from the secondary containment requirements Section R315-264-193.

(1) In deciding whether to grant a variance based on a demonstration of equivalent protection of ground water and surface water, the Director shall consider:

(i) The nature and quantity of the wastes;

(ii) The proposed alternate design and operation;

(iii) The hydrogeologic setting of the facility, including the thickness of soils present between the tank system and ground water; and

(iv) All other factors that would influence the quality and mobility of the hazardous constituents and the potential for them to migrate to ground water or surface water.

(2) In deciding whether to grant a variance based on a demonstration of no substantial present or potential hazard, the Director shall consider:

(i) The potential adverse effects on ground water, surface water, and land quality taking into account:

(A) The physical and chemical characteristics of the waste

in the tank system, including its potential for migration,

(B) The hydrogeological characteristics of the facility and surrounding land,

(C) The potential for health risks caused by human exposure to waste constituents,

(D) The potential for damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents, and

(E) The persistence and permanence of the potential adverse effects;

(ii) The potential adverse effects of a release on ground-water quality, taking into account:

(A) The quantity and quality of ground water and the direction of ground-water flow,

(B) The proximity and withdrawal rates of ground-water users,

(C) The current and future uses of ground water in the area, and

(D) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground-water quality;

(iii) The potential adverse effects of a release on surface water quality, taking into account:

(A) The quantity and quality of ground water and the direction of ground-water flow,

(B) The patterns of rainfall in the region,

(C) The proximity of the tank system to surface waters,

(D) The current and future uses of surface waters in the area and any water quality standards established for those surface waters, and

(E) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface-water quality; and

(iv) The potential adverse effects of a release on the land surrounding the tank system, taking into account:

(A) The patterns of rainfall in the region, and

(B) The current and future uses of the surrounding land.

(3) The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with the requirements of Subsection R315-264-193(g)(1), at which a release of hazardous waste has occurred from the primary tank system but has not migrated beyond the zone of engineering control, as established in the variance, shall:

(i) Comply with the requirements of Section R315-264-196, except Subsection R315-264-193(d), and

(ii) Decontaminate or remove contaminated soil to the extent necessary to:

(A) Enable the tank system for which the variance was granted to resume operation with the capability for the detection of releases at least equivalent to the capability it had prior to the release; and

(B) Prevent the migration of hazardous waste or hazardous constituents to ground water or surface water; and

(iii) If contaminated soil cannot be removed or decontaminated in accordance with Subsection R315-264-193(g)(3)(ii), comply with the requirement of Subsection R315-264-197(b).

(4) The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with the requirements of Subsection R315-264-193(g)(1), at which a release of hazardous waste has occurred from the primary tank system and has migrated beyond the zone of engineering control, as established in the variance, shall:

(i) Comply with the requirements of Subsections R315-264-196(a), (b), (c), and (d); and

(ii) Prevent the migration of hazardous waste or hazardous constituents to ground water or surface water, if possible, and decontaminate or remove contaminated soil. If contaminated soil cannot be decontaminated or removed or if ground water

has been contaminated, the owner or operator shall comply with the requirements of Subsection R315-264-197(b); and

(iii) If repairing, replacing, or reinstalling the tank system, provide secondary containment in accordance with the requirements of Subsections R315-264-193(a) through (f) or reapply for a variance from secondary containment and meet the requirements for new tank systems in Section R315-264-192 if the tank system is replaced. The owner or operator shall comply with these requirements even if contaminated soil can be decontaminated or removed and ground water or surface water has not been contaminated.

(h) The following procedures shall be followed in order to request a variance from secondary containment:

(1) The Director shall be notified in writing by the owner or operator that he intends to conduct and submit a demonstration for a variance from secondary containment as allowed in Subsection R315-264-193(g) according to the following schedule:

(i) For existing tank systems, at least 24 months prior to the date that secondary containment shall be provided in accordance with Subsection R315-264-193(a).

(ii) For new tank systems, at least 30 days prior to entering into a contract for installation.

(2) As part of the notification, the owner or operator shall also submit to the Director a description of the steps necessary to conduct the demonstration and a timetable for completing each of the steps. The demonstration shall address each of the factors listed in Subsection R315-264-193(g)(1) or (g)(2);

(3) The demonstration for a variance shall be completed within 180 days after notifying the Director of an intent to conduct the demonstration; and

(4) If a variance is granted under Subsection R315-264-193(h), the Director shall require the permittee to construct and operate the tank system in the manner that was demonstrated to meet the requirements for the variance.

(i) All tank systems, until such time as secondary containment that meets the requirements Section R315-264-193 is provided, shall comply with the following:

(1) For non-enterable underground tanks, a leak test that meets the requirements of Subsection R315-264-191(b)(5) or other tank integrity method, as approved or required by the Director, shall be conducted at least annually.

(2) For other than non-enterable underground tanks, the owner or operator shall either conduct a leak test as in Subsection R315-264-193(i)(1) or develop a schedule and procedure for an assessment of the overall condition of the tank system by a qualified Professional Engineer. The schedule and procedure shall be adequate to detect obvious cracks, leaks, and corrosion or erosion that may lead to cracks and leaks. The owner or operator shall remove the stored waste from the tank, if necessary, to allow the condition of all internal tank surfaces to be assessed. The frequency of these assessments shall be based on the material of construction of the tank and its ancillary equipment, the age of the system, the type of corrosion or erosion protection used, the rate of corrosion or erosion observed during the previous inspection, and the characteristics of the waste being stored or treated.

(3) For ancillary equipment, a leak test or other integrity assessment as approved by the Director shall be conducted at least annually.

Note: The practices described in the American Petroleum Institute (API) Publication Guide for Inspection of Refinery Equipment, Chapter XIII, "Atmospheric and Low-Pressure Storage Tanks," 4th edition, 1981, may be used, where applicable, as guidelines for assessing the overall condition of the tank system.

(4) The owner or operator shall maintain on file at the facility a record of the results of the assessments conducted in accordance with Subsections R315-264-193(i)(1) through (i)(3).

(5) If a tank system or component is found to be leaking or unfit for use as a result of the leak test or assessment in Subsections R315-264-193(i)(1) through (i)(3), the owner or operator shall comply with the requirements of Section R315-264-196.

R315-264-194. General Operating Requirements.

(a) Hazardous wastes or treatment reagents shall not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.

(b) The owner or operator shall use appropriate controls and practices to prevent spills and overflows from tank or containment systems. These include at a minimum:

(1) Spill prevention controls, e.g., check valves, dry disconnect couplings;

(2) Overfill prevention controls, e.g., level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank; and

(3) Maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.

(c) The owner or operator shall comply with the requirements of Section R315-264-196 if a leak or spill occurs in the tank system.

R315-264-195. Inspections.

(a) The owner or operator shall develop and follow a schedule and procedure for inspecting overfill controls.

(b) The owner or operator shall inspect at least once each operating day data gathered from monitoring and leak detection equipment, e.g., pressure or temperature gauges, monitoring wells, to ensure that the tank system is being operated according to its design.

Note: Subsection R315-264-15(c) requires the owner or operator to remedy any deterioration or malfunction he finds. Section R315-264-196 requires the owner or operator to notify the Director within 24 hours of confirming a leak. Also, 40 CFR part 302 may require the owner or operator to notify the National Response Center of a release.

(c) In addition, except as noted under Subsection R315-264-195(d), the owner or operator shall inspect at least once each operating day:

(1) Above ground portions of the tank system, if any, to detect corrosion or releases of waste.

(2) The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system, e.g., dikes, to detect erosion or signs of releases of hazardous waste, e.g., wet spots, dead vegetation.

(d) Owners or operators of tank systems that either use leak detection systems to alert facility personnel to leaks, or implement established workplace practices to ensure leaks are promptly identified, shall inspect at least weekly those areas described in Subsections R315-264-195(c)(1) and (c)(2). Use of the alternate inspection schedule shall be documented in the facility's operating record. This documentation shall include a description of the established workplace practices at the facility.

(e) Reserved

(f) Ancillary equipment that is not provided with secondary containment, as described in Subsections R315-264-193(f)(1) through (4), shall be inspected at least once each operating day.

(g) The owner or operator shall inspect cathodic protection systems, if present, according to, at a minimum, the following schedule to ensure that they are functioning properly:

(1) The proper operation of the cathodic protection system shall be confirmed within six months after initial installation and annually thereafter; and

(2) All sources of impressed current shall be inspected and/or tested, as appropriate, at least bimonthly, i.e., every other month.

Note: The practices described in the National Association of Corrosion Engineers (NACE) standard, "Recommended Practice (RP-02-85)-Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," and the American Petroleum Institute (API) Publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems," may be used, where applicable, as guidelines in maintaining and inspecting cathodic protection systems.

(h) The owner or operator shall document in the operating record of the facility an inspection of those items in Subsections R315-264-195(a) through (c).

R315-264-196. Response to Leaks or Spills and Disposition of Leaking or Unfit-for-Use Tank Systems.

A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, shall be removed from service immediately, and the owner or operator shall satisfy the following requirements:

(a) Cessation of use; prevent flow or addition of wastes. The owner or operator shall immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.

(b) Removal of waste from tank system or secondary containment system.

(1) If the release was from the tank system, the owner/operator shall, within 24 hours after detection of the leak or, if the owner/operator demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.

(2) If the material released was to a secondary containment system, all released materials shall be removed within 24 hours or in as timely a manner as is possible to prevent harm to human health and the environment.

(c) Containment of visible releases to the environment. The owner/operator shall immediately conduct a visual inspection of the release and, based upon that inspection:

(1) Prevent further migration of the leak or spill to soils or surface water; and

(2) Remove, and properly dispose of, any visible contamination of the soil or surface water.

(d) Notifications, reports.

(1) Any release to the environment, except as provided in Subsection R315-264-196(d)(2), shall be reported to the Director within 24 hours of its detection. If the release has been reported pursuant to 40 CFR part 302, that report shall satisfy this requirement.

(2) A leak or spill of hazardous waste is exempted from the requirements of Subsection R315-264-196(d) if it is:

(i) Less than or equal to a quantity of one (1) pound, and

(ii) Immediately contained and cleaned up.

(3) Within 30 days of detection of a release to the environment, a report containing the following information shall be submitted to the Director:

(i) Likely route of migration of the release;

(ii) Characteristics of the surrounding soil, soil composition, geology, hydrogeology, climate;

(iii) Results of any monitoring or sampling conducted in connection with the release, if available. If sampling or monitoring data relating to the release are not available within 30 days, these data shall be submitted to the Director as soon as they become available.

(iv) Proximity to downgradient drinking water, surface

water, and populated areas; and

(v) Description of response actions taken or planned.

(e) Provision of secondary containment, repair, or closure.

(1) Unless the owner/operator satisfies the requirements of Subsection R315-264-196(e)(2) through (4), the tank system shall be closed in accordance with Section R315-264-197.

(2) If the cause of the release was a spill that has not damaged the integrity of the system, the owner/operator may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.

(3) If the cause of the release was a leak from the primary tank system into the secondary containment system, the system shall be repaired prior to returning the tank system to service.

(4) If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the owner/operator shall provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of Section R315-264-193 before it can be returned to service, unless the source of the leak is an aboveground portion of a tank system that can be inspected visually. If the source is an aboveground component that can be inspected visually, the component shall be repaired and may be returned to service without secondary containment as long as the requirements of Subsection R315-264-196(f) are satisfied. If a component is replaced to comply with the requirements of Subsection R315-264-196(e)(4), that component shall satisfy the requirements for new tank systems or components in Sections R315-264-192 and 193. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection, e.g., the bottom of an inground or onground tank, the entire component shall be provided with secondary containment in accordance with Section R315-264-193 prior to being returned to use.

(f) Certification of major repairs. If the owner/operator has repaired a tank system in accordance with Subsection R315-264-196(e), and the repair has been extensive, e.g., installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel, the tank system shall not be returned to service unless the owner/operator has obtained a certification by a qualified Professional Engineer in accordance with Subsection R315-270-11(d) that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification shall be placed in the operating record and maintained until closure of the facility.

Note: The Director may, on the basis of any information received that there is or has been a release of hazardous waste or hazardous constituents into the environment, issue an order requiring corrective action or such other response as deemed necessary to protect human health or the environment.

Note: See Subsection R315-264-15(c) for the requirements necessary to remedy a failure. Also, 40 CFR part 302 may require the owner or operator to notify the National Response Center of certain releases.

R315-264-197. Closure and Post-Closure Care.

(a) At closure of a tank system, the owner or operator shall remove or decontaminate all waste residues, contaminated containment system components, liners, etc., contaminated soils, and structures and equipment contaminated with waste, and manage them as hazardous waste, unless Subsection R315-261-3(d) applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems shall meet all of the requirements specified in Sections R315-264-110 through 120, 140 through 151.

(b) If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in Subsection R315-264-197(a), then the owner or operator shall close the tank system and

perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills, Subsection R315-264-310. In addition, for the purposes of closure, post-closure, and financial responsibility, such a tank system is then considered to be a landfill, and the owner or operator shall meet all of the requirements for landfills specified in Sections R315-264-110 through 120, 140 through 151.

(c) If an owner or operator has a tank system that does not have secondary containment that meets the requirements of Subsections R315-264-193(b) through (f) and has not been granted a variance from the secondary containment requirements in accordance with Subsection R315-264-193(g), then:

(1) The closure plan for the tank system shall include both a plan for complying with Subsection R315-264-197(a) and a contingent plan for complying with Subsection R315-264-197(b).

(2) A contingent post-closure plan for complying with Subsection R315-264-197(b) shall be prepared and submitted as part of the permit application.

(3) The cost estimates calculated for closure and post-closure care shall reflect the costs of complying with the contingent closure plan and the contingent post-closure plan, if those costs are greater than the costs of complying with the closure plan prepared for the expected closure under Subsection R315-264-197(a).

(4) Financial assurance shall be based on the cost estimates in Subsection R315-264-197(c)(3).

(5) For the purposes of the contingent closure and post-closure plans, such a tank system is considered to be a landfill, and the contingent plans shall meet all of the closure, post-closure, and financial responsibility requirements for landfills under Sections R315-264-110 through 120, 140 through 148, and 151.

R315-264-198. Special Requirements for Ignitable or Reactive Wastes.

(a) Ignitable or reactive waste shall not be placed in tank systems, unless:

(1) The waste is treated, rendered, or mixed before or immediately after placement in the tank system so that:

(i) The resulting waste, mixture, or dissolved material no longer meets the definition of ignitable or reactive waste under Sections R315-261-21 or 23, and

(ii) Subsection R315-264-17(b) is complied with; or

(2) The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react; or

(3) The tank system is used solely for emergencies.

(b) The owner or operator of a facility where ignitable or reactive waste is stored or treated in a tank shall comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon as required in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code," (1977 or 1981), incorporated by reference, see Section R315-260-11.

R315-264-199. Special Requirements for Incompatible Wastes.

(a) Incompatible wastes, or incompatible wastes and materials, shall not be placed in the same tank system, unless Subsection R315-264-17(b) is complied with.

(b) Hazardous waste shall not be placed in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless Subsection R315-264-17(b) is complied with.

R315-264-200. Air Emission Standards.

The owner or operator shall manage all hazardous waste placed in a tank in accordance with the applicable requirements of Sections R315-264-1030 through 1036, 1050 through 1065 and 1080 through 1090.

R315-264-220. Surface Impoundments -- Applicability.

The regulations in Sections R315-264-220 through 223 and 226 through 232 apply to owners and operators of facilities that use surface impoundments to treat, store, or dispose of hazardous waste except as Section R315-264-1 provides otherwise.

R315-264-221. Design and Operating Requirements.

(a) Any surface impoundment that is not covered by Subsection R315-264-221(c) or 40 CFR 265.221, which is adopted by reference, shall have a liner for all portions of the impoundment, except for existing portions of such impoundments. The liner shall be designed, constructed, and installed to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil or ground water or surface water at any time during the active life, including the closure period, of the impoundment. The liner may be constructed of materials that may allow wastes to migrate into the liner, but not into the adjacent subsurface soil or ground water or surface water, during the active life of the facility, provided that the impoundment is closed in accordance with Subsection R315-264-228(a)(1). For impoundments that will be closed in accordance with Subsection R315-264-228(a)(2), the liner shall be constructed of materials that can prevent wastes from migrating into the liner during the active life of the facility. The liner shall be:

(1) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients, including static head and external hydrogeologic forces, physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

(2) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and

(3) Installed to cover all surrounding earth likely to be in contact with the waste or leachate.

(b) The owner or operator shall be exempted from the requirements of Subsection R315-264-221(a) if the Director finds, based on a demonstration by the owner or operator, that alternate design and operating practices, together with location characteristics, shall prevent the migration of any hazardous constituents, see Subsection R315-264-93, into the ground water or surface water at any future time. In deciding whether to grant an exemption, the Director shall consider:

(1) The nature and quantity of the wastes;

(2) The proposed alternate design and operation;

(3) The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils present between the impoundment and ground water or surface water; and

(4) All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.

(c) The owner or operator of each new surface impoundment unit on which construction commences after January 29, 1992, each lateral expansion of a surface impoundment unit on which construction commences after July 29, 1992 and each replacement of an existing surface impoundment unit that is to commence reuse after July 29, 1992 shall install two or more liners and a leachate collection and removal system between such liners. "Construction

commences" is as defined in Section R315-260-10 under "existing facility".

(1)(i) The liner system shall include:

(A) A top liner designed and constructed of materials, e.g., a geomembrane, to prevent the migration of hazardous constituents into such liner during the active life and post-closure care period; and

(B) A composite bottom liner, consisting of at least two components. The upper component shall be designed and constructed of materials, e.g., a geomembrane, to prevent the migration of hazardous constituents into this component during the active life and post-closure care period. The lower component shall be designed and constructed of materials to minimize the migration of hazardous constituents if a breach in the upper component were to occur. The lower component shall be constructed of at least 3 feet, 91 cm, of compacted soil material with a hydraulic conductivity of no more than 1×10^{-7} cm/sec.

(ii) The liners shall comply with Subsections R315-264-221(a)(1), (2), and (3).

(2) The leachate collection and removal system between the liners, and immediately above the bottom composite liner in the case of multiple leachate collection and removal systems, is also a leak detection system. This leak detection system shall be capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and post-closure care period. The requirements for a leak detection system in Subsection R315-264-221(c)(2) are satisfied by installation of a system that is, at a minimum:

(i) Constructed with a bottom slope of one percent or more;

(ii) Constructed of granular drainage materials with a hydraulic conductivity of 1×10^{-1} cm/sec or more and a thickness of 12 inches (30.5 cm) or more; or constructed of synthetic or geonet drainage materials with a transmissivity of 3×10^{-4} m²/sec or more;

(iii) Constructed of materials that are chemically resistant to the waste managed in the surface impoundment and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes and any waste cover materials or equipment used at the surface impoundment;

(iv) Designed and operated to minimize clogging during the active life and post-closure care period; and

(v) Constructed with sumps and liquid removal methods, e.g., pumps, of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit shall have its own sump(s). The design of each sump and removal system shall provide a method for measuring and recording the volume of liquids present in the sump and of liquids removed.

(3) The owner or operator shall collect and remove pumpable liquids in the sumps to minimize the head on the bottom liner.

(4) The owner or operator of a leak detection system that is not located completely above the seasonal high water table shall demonstrate that the operation of the leak detection system will not be adversely affected by the presence of ground water.

(d) The Director may approve alternative design or operating practices to those specified in Subsection R315-264-221(c) if the owner or operator demonstrates to the Director that such design and operating practices, together with location characteristics:

(1) Will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as the liners and leachate collection and removal system specified in Subsection R315-264-221(c); and

(2) Will allow detection of leaks of hazardous constituents through the top liner at least as effectively.

(e) The double liner requirement set forth in Subsection R315-264-221(c) may be waived by the Director for any monofill, if:

(1) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the toxicity characteristic in Section R315-261-24; and

(2)(i)(A) The monofill has at least one liner for which there is no evidence that such liner is leaking. For the purposes of Subsection R315-264-221(e), the term "liner" means a liner designed, constructed, installed, and operated to prevent hazardous waste from passing into the liner at any time during the active life of the facility, or a liner designed, constructed, installed, and operated to prevent hazardous waste from migrating beyond the liner to adjacent subsurface soil, ground water, or surface water at any time during the active life of the facility. In the case of any surface impoundment which has been exempted from the requirements of Subsection R315-264-221(c) on the basis of a liner designed, constructed, installed, and operated to prevent hazardous waste from passing beyond the liner, at the closure of such impoundment, the owner or operator shall remove or decontaminate all waste residues, all contaminated liner material, and contaminated soil to the extent practicable. If all contaminated soil is not removed or decontaminated, the owner or operator of such impoundment will comply with appropriate post-closure requirements, including but not limited to ground-water monitoring and corrective action;

(B) The monofill is located more than one-quarter mile from an "underground source of drinking water," as that term is defined in Section R315-270-2; and

(C) The monofill is in compliance with generally applicable ground-water monitoring requirements for facilities with permits under Section 19-6-108; or

(ii) The owner or operator demonstrates that the monofill is located, designed and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

(f) The owner or operator of any replacement surface impoundment unit is exempt from Subsection R315-264-221(c) if:

(1) The existing unit was constructed in compliance with the design standards of sections 3004 (o)(1)(A)(i) and (o)(5) of the Resource Conservation and Recovery Act; and

(2) There is no reason to believe that the liner is not functioning as designed.

(g) A surface impoundment shall be designed, constructed, maintained, and operated to prevent overtopping resulting from normal or abnormal operations; overfilling; wind and wave action; rainfall; run-on; malfunctions of level controllers, alarms, and other equipment; and human error.

(h) A surface impoundment shall have dikes that are designed, constructed, and maintained with sufficient structural integrity to prevent massive failure of the dikes. In ensuring structural integrity, it shall not be presumed that the liner system will function without leakage during the active life of the unit.

(i) The Director shall specify in the permit all design and operating practices that are necessary to ensure that the requirements of Section R315-264-221 are satisfied.

R315-264-222. Action Leakage Rate.

(a) The Director shall approve an action leakage rate for surface impoundment units subject to Subsections R315-264-221(c) or (d). The action leakage rate is the maximum design flow rate that the leak detection system can remove without the fluid head on the bottom liner exceeding one foot.

The action leakage rate shall include an adequate safety margin to allow for uncertainties in the design, e.g., slope, hydraulic conductivity, thickness of drainage material, construction, operation, and location of the leak detection system, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the leak detection system, and proposed response actions, e.g., the action leakage rate shall consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.

(b) To determine if the action leakage rate has been exceeded, the owner or operator shall convert the weekly or monthly flow rate from the monitoring data obtained under Subsection R315-264-226(d) to an average daily flow rate, gallons per acre per day, for each sump. Unless the Director approves a different calculation, the average daily flow rate for each sump shall be calculated weekly during the active life and closure period, and if the unit is closed in accordance with Subsection R315-264-228(b), monthly during the post-closure care period when monthly monitoring is required under Subsection R315-264-226(d).

R315-264-223. Response Actions.

(a) The owner or operator of surface impoundment units subject to Subsection R315-264-221(c) or (d) shall have an approved response action plan before receipt of waste. The response action plan shall set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan shall describe the actions specified in Subsection R315-264-223(b).

(b) If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator shall:

(1) Notify the Director in writing of the exceedance within 7 days of the determination;

(2) Submit a preliminary written assessment to the Director within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;

(3) Determine to the extent practicable the location, size, and cause of any leak;

(4) Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;

(5) Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and

(6) Within 30 days after the notification that the action leakage rate has been exceeded, submit to the Director the results of the analyses specified in Subsections R315-264-223(b)(3), (4), and (5), the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator shall submit to the Director a report summarizing the results of any remedial actions taken and actions planned.

(c) To make the leak and/or remediation determinations in Subsections R315-264-223(b)(3), (4), and (5), the owner or operator shall:

(1)(i) Assess the source of liquids and amounts of liquids by source,

(ii) Conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and

(iii) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or

(2) Document why such assessments are not needed.

R315-264-226. Monitoring and Inspection.

(a) During construction and installation, liners, except in the case of existing portions of surface impoundments exempt from Subsection R315-264-221(a), and cover systems, e.g., membranes, sheets, or coatings, shall be inspected for uniformity, damage, and imperfections, e.g., holes, cracks, thin spots, or foreign materials. Immediately after construction or installation:

(1) Synthetic liners and covers shall be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters; and

(2) Soil-based and admixed liners and covers shall be inspected for imperfections including lenses, cracks, channels, root holes, or other structural non-uniformities that may cause an increase in the permeability of the liner or cover.

(b) While a surface impoundment is in operation, it shall be inspected weekly and after storms to detect evidence of any of the following:

(1) Deterioration, malfunctions, or improper operation of overtopping control systems;

(2) Sudden drops in the level of the impoundment's contents; and

(3) Severe erosion or other signs of deterioration in dikes or other containment devices.

(c) Prior to the issuance of a permit, and after any extended period of time, at least six months, during which the impoundment was not in service, the owner or operator shall obtain a certification from a qualified engineer that the impoundment's dike, including that portion of any dike which provides freeboard, has structural integrity. The certification shall establish, in particular, that the dike:

(1) Will withstand the stress of the pressure exerted by the types and amounts of wastes to be placed in the impoundment; and

(2) Will not fail due to scouring or piping, without dependence on any liner system included in the surface impoundment construction.

(d)(1) An owner or operator required to have a leak detection system under Subsection R315-264-221(c) or (d) shall record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.

(2) After the final cover is installed, the amount of liquids removed from each leak detection system sump shall be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for two consecutive months, the amount of liquids in the sumps shall be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps shall be recorded at least semi-annually. If at any time during the post-closure care period the pump operating level is exceeded at units on quarterly or semi-annual recording schedules, the owner or operator shall return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.

(3) "Pump operating level" is a liquid level proposed by the owner or operator and approved by the Director based on pump activation level, sump dimensions, and level that avoids backup into the drainage layer and minimizes head in the sump.

R315-264-227. Emergency Repairs; Contingency Plans.

(a) A surface impoundment shall be removed from service in accordance with Subsection R315-264-227(b) when:

(1) The level of liquids in the impoundment suddenly drops and the drop is not known to be caused by changes in the flows into or out of the impoundment; or

(2) The dike leaks.

(b) When a surface impoundment shall be removed from service as required by Subsection R315-264-227(a), the owner

or operator shall:

- (1) Immediately shut off the flow or stop the addition of wastes into the impoundment;
- (2) Immediately contain any surface leakage which has occurred or is occurring;
- (3) Immediately stop the leak;
- (4) Take any other necessary steps to stop or prevent catastrophic failure;
- (5) If a leak cannot be stopped by any other means, empty the impoundment; and
- (6) Notify the Director of the problem in writing within seven days after detecting the problem.

(c) As part of the contingency plan required in Sections R315-264-50 through 56, the owner or operator shall specify a procedure for complying with the requirements of Subsection R315-264-227(b).

(d) No surface impoundment that has been removed from service in accordance with the requirements of Section R315-264-227 may be restored to service unless the portion of the impoundment which was failing is repaired and the following steps are taken:

(1) If the impoundment was removed from service as the result of actual or imminent dike failure, the dike's structural integrity shall be recertified in accordance with Subsection R315-264-226(c).

(2) If the impoundment was removed from service as the result of a sudden drop in the liquid level, then:

(i) For any existing portion of the impoundment, a liner shall be installed in compliance with Subsection R315-264-221(a); and

(ii) For any other portion of the impoundment, the repaired liner system shall be certified by a qualified engineer as meeting the design specifications approved in the permit.

(e) A surface impoundment that has been removed from service in accordance with the requirements of Section R315-264-227 and that is not being repaired shall be closed in accordance with the provisions of Section R315-264-228.

R315-264-228. Closure and Post-Closure Care.

(a) At closure, the owner or operator shall:

(1) Remove or decontaminate all waste residues, contaminated containment system components, liners, etc., contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless Subsection R315-261-3(d) applies; or

(2)(i) Eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and waste residues;

(ii) Stabilize remaining wastes to a bearing capacity sufficient to support final cover; and

(iii) Cover the surface impoundment with a final cover designed and constructed to:

(A) Provide long-term minimization of the migration of liquids through the closed impoundment;

(B) Function with minimum maintenance;

(C) Promote drainage and minimize erosion or abrasion of the final cover;

(D) Accommodate settling and subsidence so that the cover's integrity is maintained; and

(E) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

(b) If some waste residues or contaminated materials are left in place at final closure, the owner or operator shall comply with all post-closure requirements contained in Sections R315-264-117 through 120, including maintenance and monitoring throughout the post-closure care period, specified in the permit under Section R315-264-117. The owner or operator shall:

(1) Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to

correct the effects of settling, subsidence, erosion, or other events;

(2) Maintain and monitor the leak detection system in accordance with Subsections R315-264-221(c)(2)(iv) and (3) and 226(d), and comply with all other applicable leak detection system requirements of Rule R315-264;

(3) Maintain and monitor the ground-water monitoring system and comply with all other applicable requirements of Sections R315-264-90 through 101; and

(4) Prevent run-on and run-off from eroding or otherwise damaging the final cover.

(c)(1) If an owner or operator plans to close a surface impoundment in accordance with Subsection R315-264-228(a)(1), and the impoundment does not comply with the liner requirements of Subsection R315-264-221(a) and is not exempt from them in accordance with Subsection R315-264-221(b), then:

(i) The closure plan for the impoundment under Section R315-264-112 shall include both a plan for complying with Subsection R315-264-228(a)(1) and a contingent plan for complying with Subsection R315-264-228(a)(2) in case not all contaminated subsoils can be practicably removed at closure; and

(ii) The owner or operator shall prepare a contingent post-closure plan under Section R315-264-118 for complying with Subsection R315-264-228(b) in case not all contaminated subsoils can be practicably removed at closure.

(2) The cost estimates calculated under Sections R315-264-142 and 264-144 for closure and post-closure care of an impoundment subject to Subsection R315-264-228(c) shall include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under Subsection R315-264-228(a)(1).

R315-264-229. Special Requirements for Ignitable or Reactive Waste.

Ignitable or reactive waste shall not be placed in a surface impoundment, unless the waste and impoundment satisfy all applicable requirements of Rule R315-268, and:

(a) The waste is treated, rendered, or mixed before or immediately after placement in the impoundment so that:

(1) The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under Sections R315-261-21 or 23; and

(2) Subsection R315-264-17(b) is complied with; or

(b) The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react; or

(c) The surface impoundment is used solely for emergencies.

R315-264-230. Special Requirements for Incompatible Wastes.

Incompatible wastes, or incompatible wastes and materials, see appendix V of Rule R315-264 for examples, shall not be placed in the same surface impoundment, unless Subsection R315-264-17(b) is complied with.

R315-264-231. Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027.

(a) Hazardous Wastes F020, F021, F022, F023, F026, and F027 shall not be placed in a surface impoundment unless the owner or operator operates the surface impoundment in accordance with a management plan for these wastes that is approved by the Director pursuant to the standards set out in Subsection R315-264-231(a), and in accord with all other applicable requirements of Rule R315-264. The factors to be considered are:

(1) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

(2) The attenuative properties of underlying and surrounding soils or other materials;

(3) The mobilizing properties of other materials co-disposed with these wastes; and

(4) The effectiveness of additional treatment, design, or monitoring techniques.

(b) The Director may determine that additional design, operating, and monitoring requirements are necessary for surface impoundments managing hazardous wastes F020, F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to ground water, surface water, or air so as to protect human health and the environment.

R315-264-232. Air Emission Standards.

The owner or operator shall manage all hazardous waste placed in a surface impoundment in accordance with the applicable requirements of Sections R315-264-1050 through 1065 and 1080 through 1090.

R315-264-250. Waste Piles -- Applicability.

(a) The regulations in Sections R315-264-250 through 254 and 256 through 259 apply to owners and operators of facilities that store or treat hazardous waste in piles, except as Section R315-264-1 provides otherwise.

(b) The regulations in Sections R315-264-250 through 254 and 256 through 259 do not apply to owners or operators of waste piles that are closed with wastes left in place. Such waste piles are subject to regulation under Sections R315-264-300 through 304, 309 and 310, and 312 through 317, Landfills.

(c) The owner or operator of any waste pile that is inside or under a structure that provides protection from precipitation so that neither run-off nor leachate is generated is not subject to regulation under Section R315-264-251 or under Sections R315-264-90 through 101, provided that:

(1) Liquids or materials containing free liquids are not placed in the pile;

(2) The pile is protected from surface water run-on by the structure or in some other manner;

(3) The pile is designed and operated to control dispersal of the waste by wind, where necessary, by means other than wetting; and

(4) The pile will not generate leachate through decomposition or other reactions.

R315-264-251. Design and Operating Requirements.

(a) A waste pile, except for an existing portion of a waste pile, shall have:

(1) A liner that is designed, constructed, and installed to prevent any migration of wastes out of the pile into the adjacent subsurface soil or ground water or surface water at any time during the active life, including the closure period, of the waste pile. The liner may be constructed of materials that may allow waste to migrate into the liner itself, but not into the adjacent subsurface soil or ground water or surface water, during the active life of the facility. The liner shall be:

(i) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients, including static head and external hydrogeologic forces, physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

(ii) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and

(iii) Installed to cover all surrounding earth likely to be in

contact with the waste or leachate; and

(2) A leachate collection and removal system immediately above the liner that is designed, constructed, maintained, and operated to collect and remove leachate from the pile. The Director shall specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 30 cm, one foot. The leachate collection and removal system shall be:

(i) Constructed of materials that are:

(A) Chemically resistant to the waste managed in the pile and the leachate expected to be generated; and

(B) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlaying wastes, waste cover materials, and by any equipment used at the pile; and

(ii) Designed and operated to function without clogging through the scheduled closure of the waste pile.

(b) The owner or operator shall be exempted from the requirements of Subsection R315-264-251(a), if the Director finds, based on a demonstration by the owner or operator, that alternate design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents, see Section R315-264-93, into the ground water or surface water at any future time. In deciding whether to grant an exemption, the Director shall consider:

(1) The nature and quantity of the wastes;

(2) The proposed alternate design and operation;

(3) The hydrogeologic setting of the facility, including attenuative capacity and thickness of the liners and soils present between the pile and ground water or surface water; and

(4) All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.

(c) The owner or operator of each new waste pile unit, each lateral expansion of a waste pile unit, and each replacement of an existing waste pile unit shall install two or more liners and a leachate collection and removal system above and between such liners.

(1)(i) The liner system shall include:

(A) A top liner designed and constructed of materials, e.g., a geomembrane, to prevent the migration of hazardous constituents into such liner during the active life and post-closure care period; and

(B) A composite bottom liner, consisting of at least two components. The upper component shall be designed and constructed of materials, e.g., a geomembrane, to prevent the migration of hazardous constituents into this component during the active life and post-closure care period. The lower component shall be designed and constructed of materials to minimize the migration of hazardous constituents if a breach in the upper component were to occur. The lower component shall be constructed of at least 3 feet, 91 cm, of compacted soil material with a hydraulic conductivity of no more than 1×10^{-7} cm/sec.

(ii) The liners shall comply with Subsections R315-264-251(a)(1)(i), (ii), and (iii).

(2) The leachate collection and removal system immediately above the top liner shall be designed, constructed, operated, and maintained to collect and remove leachate from the waste pile during the active life and post-closure care period. The Director shall specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 30 cm, one foot. The leachate collection and removal system shall comply with Subsections R315-264-251(c)(3)(iii) and (iv).

(3) The leachate collection and removal system between the liners, and immediately above the bottom composite liner in the case of multiple leachate collection and removal systems, is also a leak detection system. This leak detection system shall be capable of detecting, collecting, and removing leaks of

hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and post-closure care period. The requirements for a leak detection system in Subsection R315-264-251(c) are satisfied by installation of a system that is, at a minimum:

(i) Constructed with a bottom slope of one percent or more;

(ii) Constructed of granular drainage materials with a hydraulic conductivity of 1×10^{-2} cm/sec or more and a thickness of 12 inches, 30.5 cm, or more; or constructed of synthetic or geonet drainage materials with a transmissivity of 3×10^{-5} m²/sec or more;

(iii) Constructed of materials that are chemically resistant to the waste managed in the waste pile and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and equipment used at the waste pile;

(iv) Designed and operated to minimize clogging during the active life and post-closure care period; and

(v) Constructed with sumps and liquid removal methods, e.g., pumps, of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit shall have its own sump(s). The design of each sump and removal system shall provide a method for measuring and recording the volume of liquids present in the sump and of liquids removed.

(4) The owner or operator shall collect and remove pumpable liquids in the leak detection system sumps to minimize the head on the bottom liner.

(5) The owner or operator of a leak detection system that is not located completely above the seasonal high water table shall demonstrate that the operation of the leak detection system will not be adversely affected by the presence of ground water.

(d) The Director may approve alternative design or operating practices to those specified in Subsection R315-264-251(c) if the owner or operator demonstrates to the Director that such design and operating practices, together with location characteristics:

(1) Will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as the liners and leachate collection and removal systems specified in Subsection R315-264-251(c); and

(2) Will allow detection of leaks of hazardous constituents through the top liner at least as effectively.

(e) Subsection R315-264-251(c) does not apply to monofills that are granted a waiver by the Director in accordance with Section R315-264-221(e).

(f) The owner or operator of any replacement waste pile unit is exempt from Subsection R315-264-251(c) if:

(1) The existing unit was constructed in compliance with the design standards of section 3004(o)(1)(A)(i) and 3004(o)(5) of the Resource Conservation and Recovery Act; and

(2) There is no reason to believe that the liner is not functioning as designed.

(g) The owner or operator shall design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the pile during peak discharge from at least a 25-year storm.

(h) The owner or operator shall design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(i) Collection and holding facilities, e.g., tanks or basins, associated with run-on and run-off control systems shall be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.

(j) If the pile contains any particulate matter which may be

subject to wind dispersal, the owner or operator shall cover or otherwise manage the pile to control wind dispersal.

(k) The Director shall specify in the permit all design and operating practices that are necessary to ensure that the requirements of Section R315-264-251 are satisfied.

R315-264-252. Action Leakage Rate.

(a) The Director shall approve an action leakage rate for waste pile units subject to Subsections R315-264-251(c) or (d). The action leakage rate is the maximum design flow rate that the leak detection system can remove without the fluid head on the bottom liner exceeding one foot. The action leakage rate shall include an adequate safety margin to allow for uncertainties in the design, e.g., slope, hydraulic conductivity, thickness of drainage material, construction, operation, and location of the leak detection system, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the leak detection system, and proposed response actions, e.g., the action leakage rate shall consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.

(b) To determine if the action leakage rate has been exceeded, the owner or operator shall convert the weekly flow rate from the monitoring data obtained under Subsection R315-264-254(c) to an average daily flow rate, gallons per acre per day, for each sump. Unless the Director approves a different calculation, the average daily flow rate for each sump shall be calculated weekly during the active life and closure period.

R315-264-253. Response Actions.

(a) The owner or operator of waste pile units subject to Subsections R315-264-251(c) or (d) shall have an approved response action plan before receipt of waste. The response action plan shall set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan shall describe the actions specified in Subsection R315-264-253(b).

(b) If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator shall:

(1) Notify the Director in writing of the exceedance within 7 days of the determination;

(2) Submit a preliminary written assessment to the Director within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;

(3) Determine to the extent practicable the location, size, and cause of any leak;

(4) Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;

(5) Determine any other short-term and long-term actions to be taken to mitigate or stop any leaks; and

(6) Within 30 days after the notification that the action leakage rate has been exceeded, submit to the Director the results of the analyses specified in Subsections R315-264-253(b)(3), (4), and (5), the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator shall submit to the Director a report summarizing the results of any remedial actions taken and actions planned.

(c) To make the leak and/or remediation determinations in Subsections R315-264-253(b)(3), (4), and (5), the owner or operator shall:

(1)(i) Assess the source of liquids and amounts of liquids by source,

(ii) Conduct a fingerprint, hazardous constituent, or other

analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and

(iii) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or

(2) Document why such assessments are not needed.

R315-264-254. Monitoring and Inspection.

(a) During construction or installation, liners, except in the case of existing portions of piles exempt from Subsection R315-264-251(a), and cover systems, e.g., membranes, sheets, or coatings, shall be inspected for uniformity, damage, and imperfections, e.g., holes, cracks, thin spots, or foreign materials. Immediately after construction or installation:

(1) Synthetic liners and covers shall be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters; and

(2) Soil-based and admixed liners and covers shall be inspected for imperfections including lenses, cracks, channels, root holes, or other structural non-uniformities that may cause an increase in the permeability of the liner or cover.

(b) While a waste pile is in operation, it shall be inspected weekly and after storms to detect evidence of any of the following:

(1) Deterioration, malfunctions, or improper operation of run-on and run-off control systems;

(2) Proper functioning of wind dispersal control systems, where present; and

(3) The presence of leachate in and proper functioning of leachate collection and removal systems, where present.

(c) An owner or operator required to have a leak detection system under Subsection R315-264-251(c) shall record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.

R315-264-256. Special Requirements for Ignitable or Reactive Waste.

Ignitable or reactive waste shall not be placed in a waste pile unless the waste and waste pile satisfy all applicable requirements of Rule R315-268, and:

(a) The waste is treated, rendered, or mixed before or immediately after placement in the pile so that:

(1) The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under Sections R315-261-21 or 23; and

(2) Subsection R315-264-17(b) is complied with; or

(b) The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.

R315-264-257. Special Requirements for Incompatible Wastes.

(a) Incompatible wastes, or incompatible wastes and materials, see appendix V of Rule R315-264 for examples, shall not be placed in the same pile, unless Subsection R315-264-17(b) is complied with.

(b) A pile of hazardous waste that is incompatible with any waste or other material stored nearby in containers, other piles, open tanks, or surface impoundments shall be separated from the other materials, or protected from them by means of a dike, berm, wall, or other device.

(c) Hazardous waste shall not be piled on the same base where incompatible wastes or materials were previously piled, unless the base has been decontaminated sufficiently to ensure compliance with Subsection R315-264-17(b).

R315-264-258. Closure and Post-Closure Care.

(a) At closure, the owner or operator shall remove or

decontaminate all waste residues, contaminated containment system components, liners, etc., contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless Subsection R315-261-3(d) applies.

(b) If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in Subsection R315-264-258(a), the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he shall close the facility and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills, Section R315-264-310.

(c)(1) The owner or operator of a waste pile that does not comply with the liner requirements of Subsection R315-264-251(a)(1) and is not exempt from them in accordance with Subsections R315-264-250(c) or 251(b), shall:

(i) Include in the closure plan for the pile under Section R315-264-112 both a plan for complying with Subsection R315-264-258(a) and a contingent plan for complying with Subsection R315-264-258(b) in case not all contaminated subsoils can be practicably removed at closure; and

(ii) Prepare a contingent post-closure plan under Section R315-264-118 for complying with Subsection R315-264-258(b) in case not all contaminated subsoils can be practicably removed at closure.

(2) The cost estimates calculated under Sections R315-264-142 and 144 for closure and post-closure care of a pile subject to this Subsection R315-264-258(c) shall include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under Subsection R315-264-258(a).

R315-264-259. Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027.

(a) Hazardous Wastes F020, F021, F022, F023, F026, and F027 shall not be placed in waste piles that are not enclosed, as defined in Subsection R315-264-250(c), unless the owner or operator operates the waste pile in accordance with a management plan for these wastes that is approved by the Director pursuant to the standards set out in Subsection R315-264-259(a), and in accord with all other applicable requirements of Rule R315-264. The factors to be considered are:

(1) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

(2) The attenuative properties of underlying and surrounding soils or other materials;

(3) The mobilizing properties of other materials co-disposed with these wastes; and

(4) The effectiveness of additional treatment, design, or monitoring techniques.

(b) The Director may determine that additional design, operating, and monitoring requirements are necessary for piles managing hazardous wastes F020, F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to ground water, surface water, or air so as to protect human health and the environment.

R315-264-270. Land Treatment -- Applicability.

The regulations in Sections R315-264-270 through 283 apply to owners and operators of facilities that treat or dispose of hazardous waste in land treatment units, except as Section R315-264-1 provides otherwise.

R315-264-271. Treatment Program.

(a) An owner or operator subject to Sections R315-264-270 through 283 shall establish a land treatment program that is

designed to ensure that hazardous constituents placed in or on the treatment zone are degraded, transformed, or immobilized within the treatment zone. The Director shall specify in the facility permit the elements of the treatment program, including:

- (1) The wastes that are capable of being treated at the unit based on a demonstration under Section R315-264-272;
- (2) Design measures and operating practices necessary to maximize the success of degradation, transformation, and immobilization processes in the treatment zone in accordance with Subsection R315-264-273(a); and
- (3) Unsaturated zone monitoring provisions meeting the requirements of Section R315-264-278.

(b) The Director shall specify in the facility permit the hazardous constituents that shall be degraded, transformed, or immobilized under Sections R315-264-270 through 283. Hazardous constituents are constituents identified in appendix VIII of Rule R315-261 that are reasonably expected to be in, or derived from, waste placed in or on the treatment zone.

(c) The Director shall specify the vertical and horizontal dimensions of the treatment zone in the facility permit. The treatment zone is the portion of the unsaturated zone below and including the land surface in which the owner or operator intends to maintain the conditions necessary for effective degradation, transformation, or immobilization of hazardous constituents. The maximum depth of the treatment zone shall be:

- (1) No more than 1.5 meters, 5 feet, from the initial soil surface; and
- (2) More than 1 meter, 3 feet, above the seasonal high water table.

R315-264-272. Treatment Demonstration.

(a) For each waste that will be applied to the treatment zone, the owner or operator shall demonstrate, prior to application of the waste, that hazardous constituents in the waste can be completely degraded, transformed, or immobilized in the treatment zone.

(b) In making this demonstration, the owner or operator may use field tests, laboratory analyses, available data, or, in the case of existing units, operating data. If the owner or operator intends to conduct field tests or laboratory analyses in order to make the demonstration required under Subsection R315-264-272(a), he shall obtain a treatment or disposal permit under Section R315-270-63. The Director shall specify in this permit the testing, analytical, design, and operating requirements, including the duration of the tests and analyses, and, in the case of field tests, the horizontal and vertical dimensions of the treatment zone, monitoring procedures, closure and clean-up activities, necessary to meet the requirements in Subsection R315-264-272(c).

(c) Any field test or laboratory analysis conducted in order to make a demonstration under Subsection R315-264-272(a) shall:

- (1) Accurately simulate the characteristics and operating conditions for the proposed land treatment unit including:
 - (i) The characteristics of the waste, including the presence of appendix VIII of Rule R315-261 constituents;
 - (ii) The climate in the area;
 - (iii) The topography of the surrounding area;
 - (iv) The characteristics of the soil in the treatment zone, including depth; and
 - (v) The operating practices to be used at the unit.
- (2) Be likely to show that hazardous constituents in the waste to be tested will be completely degraded, transformed, or immobilized in the treatment zone of the proposed land treatment unit; and
- (3) Be conducted in a manner that protects human health and the environment considering:
 - (i) The characteristics of the waste to be tested;

- (ii) The operating and monitoring measures taken during the course of the test;
- (iii) The duration of the test;
- (iv) The volume of waste used in the test;
- (v) In the case of field tests, the potential for migration of hazardous constituents to ground water or surface water.

R315-264-273. Design and Operating Requirements.

The Director shall specify in the facility permit how the owner or operator will design, construct, operate, and maintain the land treatment unit in compliance with Section R315-264-273.

(a) The owner or operator shall design, construct, operate, and maintain the unit to maximize the degradation, transformation, and immobilization of hazardous constituents in the treatment zone. The owner or operator shall design, construct, operate, and maintain the unit in accord with all design and operating conditions that were used in the treatment demonstration under Section R315-264-272. At a minimum, the Director shall specify the following in the facility permit:

- (1) The rate and method of waste application to the treatment zone;
- (2) Measures to control soil pH;
- (3) Measures to enhance microbial or chemical reactions, e.g., fertilization, tilling; and
- (4) Measures to control the moisture content of the treatment zone.

(b) The owner or operator shall design, construct, operate, and maintain the treatment zone to minimize run-off of hazardous constituents during the active life of the land treatment unit.

(c) The owner or operator shall design, construct, operate, and maintain a run-on control system capable of preventing flow onto the treatment zone during peak discharge from at least a 25-year storm.

(d) The owner or operator shall design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(e) Collection and holding facilities, e.g., tanks or basins, associated with run-on and run-off control systems shall be emptied or otherwise managed expeditiously after storms to maintain the design capacity of the system.

(f) If the treatment zone contains particulate matter which may be subject to wind dispersal, the owner or operator shall manage the unit to control wind dispersal.

(g) The owner or operator shall inspect the unit weekly and after storms to detect evidence of:

- (1) Deterioration, malfunctions, or improper operation of run-on and run-off control systems; and
- (2) Improper functioning of wind dispersal control measures.

R315-264-276. Food-Chain Crops.

The Director may allow the growth of food-chain crops in or on the treatment zone only if the owner or operator satisfies the conditions of Section R315-264-276. The Director shall specify in the facility permit the specific food-chain crops which may be grown.

(a)(1) The owner or operator shall demonstrate that there is no substantial risk to human health caused by the growth of such crops in or on the treatment zone by demonstrating, prior to the planting of such crops, that hazardous constituents other than cadmium:

- (i) Will not be transferred to the food or feed portions of the crop by plant uptake or direct contact, and will not otherwise be ingested by food-chain animals, e.g., by grazing; or
- (ii) Will not occur in greater concentrations in or on the food or feed portions of crops grown on the treatment zone than

in or on identical portions of the same crops grown on untreated soils under similar conditions in the same region.

(2) The owner or operator shall make the demonstration required under Subsection R315-264-276(a) prior to the planting of crops at the facility for all constituents identified in appendix VIII of Rule R315-261 that are reasonably expected to be in, or derived from, waste placed in or on the treatment zone.

(3) In making a demonstration under Subsection R315-264-276(a), the owner or operator may use field tests, greenhouse studies, available data, or, in the case of existing units, operating data, and shall:

(i) Base the demonstration on conditions similar to those present in the treatment zone, including soil characteristics, e.g., pH, cation exchange capacity, specific wastes, application rates, application methods, and crops to be grown; and

(ii) Describe the procedures used in conducting any tests, including the sample selection criteria, sample size, analytical methods, and statistical procedures.

(4) If the owner or operator intends to conduct field tests or greenhouse studies in order to make the demonstration required under Subsection R315-264-276(a), he shall obtain a permit for conducting such activities.

(b) The owner or operator shall comply with the following conditions if cadmium is contained in wastes applied to the treatment zone:

(1)(i) The pH of the waste and soil mixture shall be 6.5 or greater at the time of each waste application, except for waste containing cadmium at concentrations of 2 mg/kg, dry weight, or less;

(ii) The annual application of cadmium from waste shall not exceed 0.5 kilograms per hectare, kg/ha, on land used for tobacco, leafy vegetables, or root crops grown for human consumption or any other food-chain crop;

(iii) The cumulative application of cadmium from waste shall not exceed 5 kg/ha if the waste and soil mixture has a pH of less than 6.5; and

(iv) If the waste and soil mixture has a pH of 6.5 or greater or is maintained at a pH of 6.5 or greater during crop growth, the cumulative application of cadmium from waste shall not exceed: 5 kg/ha if soil cation exchange capacity (CEC) is less than 5 meq/100g; 10 kg/ha if soil CEC is 5-15 meq/100g; and 20 kg/ha if soil CEC is greater than 15 meq/100g; or

(2)(i) Animal feed shall be the only food-chain crop produced;

(ii) The pH of the waste and soil mixture shall be 6.5 or greater at the time of waste application or at the time the crop is planted, whichever occurs later, and this pH level shall be maintained whenever food-chain crops are grown;

(iii) There shall be an operating plan which demonstrates how the animal feed will be distributed to preclude ingestion by humans. The operating plan shall describe the measures to be taken to safeguard against possible health hazards from cadmium entering the food chain, which may result from alternative land uses; and

(iv) Future property owners shall be notified by a stipulation in the land record or property deed which states that the property has received waste at high cadmium application rates and that food-chain crops shall not be grown except in compliance with Subsection R315-264-276(b)(2).

R315-264-278. Unsaturated Zone Monitoring.

An owner or operator subject to Sections R315-270 through 283 shall establish an unsaturated zone monitoring program to discharge the following responsibilities:

(a) The owner or operator shall monitor the soil and soil-pore liquid to determine whether hazardous constituents migrate out of the treatment zone.

(1) The Director shall specify the hazardous constituents

to be monitored in the facility permit. The hazardous constituents to be monitored are those specified under Section R315-264-271(b).

(2) The Director may require monitoring for principal hazardous constituents (PHCs) in lieu of the constituents specified under Section R315-264-271(b). PHCs are hazardous constituents contained in the wastes to be applied at the unit that are the most difficult to treat, considering the combined effects of degradation, transformation, and immobilization. The Director shall establish PHCs if he finds, based on waste analyses, treatment demonstrations, or other data, that effective degradation, transformation, or immobilization of the PHCs will assure treatment at at least equivalent levels for the other hazardous constituents in the wastes.

(b) The owner or operator shall install an unsaturated zone monitoring system that includes soil monitoring using soil cores and soil-pore liquid monitoring using devices such as lysimeters. The unsaturated zone monitoring system shall consist of a sufficient number of sampling points at appropriate locations and depths to yield samples that:

(1) Represent the quality of background soil-pore liquid quality and the chemical make-up of soil that has not been affected by leakage from the treatment zone; and

(2) Indicate the quality of soil-pore liquid and the chemical make-up of the soil below the treatment zone.

(c) The owner or operator shall establish a background value for each hazardous constituent to be monitored under Subsection R315-264-278(a). The permit shall specify the background values for each constituent or specify the procedures to be used to calculate the background values.

(1) Background soil values may be based on a one-time sampling at a background plot having characteristics similar to those of the treatment zone.

(2) Background soil-pore liquid values shall be based on at least quarterly sampling for one year at a background plot having characteristics similar to those of the treatment zone.

(3) The owner or operator shall express all background values in a form necessary for the determination of statistically significant increases under Subsection R315-264-278(f).

(4) In taking samples used in the determination of all background values, the owner or operator shall use an unsaturated zone monitoring system that complies with Subsection R315-264-278(b)(1).

(d) The owner or operator shall conduct soil monitoring and soil-pore liquid monitoring immediately below the treatment zone. The Director shall specify the frequency and timing of soil and soil-pore liquid monitoring in the facility permit after considering the frequency, timing, and rate of waste application, and the soil permeability. The owner or operator shall express the results of soil and soil-pore liquid monitoring in a form necessary for the determination of statistically significant increases under Subsection R315-264-278(f).

(e) The owner or operator shall use consistent sampling and analysis procedures that are designed to ensure sampling results that provide a reliable indication of soil-pore liquid quality and the chemical make-up of the soil below the treatment zone. At a minimum, the owner or operator shall implement procedures and techniques for:

- (1) Sample collection;
- (2) Sample preservation and shipment;
- (3) Analytical procedures; and
- (4) Chain of custody control.

(f) The owner or operator shall determine whether there is a statistically significant change over background values for any hazardous constituent to be monitored under Subsection R315-264-278(a) below the treatment zone each time he conducts soil monitoring and soil-pore liquid monitoring under Subsection R315-264-278(d).

(1) In determining whether a statistically significant

increase has occurred, the owner or operator shall compare the value of each constituent, as determined under Subsection R315-264-278(d), to the background value for that constituent according to the statistical procedure specified in the facility permit under Subsection R315-264-278(e).

(2) The owner or operator shall determine whether there has been a statistically significant increase below the treatment zone within a reasonable time period after completion of sampling. The Director shall specify that time period in the facility permit after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of soil and soil-pore liquid samples.

(3) The owner or operator shall determine whether there is a statistically significant increase below the treatment zone using a statistical procedure that provides reasonable confidence that migration from the treatment zone will be identified. The Director shall specify a statistical procedure in the facility permit that he finds:

(i) Is appropriate for the distribution of the data used to establish background values; and

(ii) Provides a reasonable balance between the probability of falsely identifying migration from the treatment zone and the probability of failing to identify real migration from the treatment zone.

(g) If the owner or operator determines, pursuant to Subsection R315-264-278(f), that there is a statistically significant increase of hazardous constituents below the treatment zone, he shall:

(1) Notify the Director of this finding in writing within seven days. The notification shall indicate what constituents have shown statistically significant increases.

(2) Within 90 days, submit to the Director an application for a permit modification to modify the operating practices at the facility in order to maximize the success of degradation, transformation, or immobilization processes in the treatment zone.

(h) If the owner or operator determines, pursuant to Subsection R315-264-278(f), that there is a statistically significant increase of hazardous constituents below the treatment zone, he may demonstrate that a source other than regulated units caused the increase or that the increase resulted from an error in sampling, analysis, or evaluation. While the owner or operator may make a demonstration under Subsection R315-264-278(h) in addition to, or in lieu of, submitting a permit modification application under Subsection R315-264-278(g)(2), he is not relieved of the requirement to submit a permit modification application within the time specified in Subsection R315-264-278(g)(2) unless the demonstration made under Subsection R315-264-278(h) successfully shows that a source other than regulated units caused the increase or that the increase resulted from an error in sampling, analysis, or evaluation. In making a demonstration under Subsection R315-264-278(h), the owner or operator shall:

(1) Notify the Director in writing within seven days of determining a statistically significant increase below the treatment zone that he intends to make a determination under Subsection R315-264-278(h);

(2) Within 90 days, submit a report to the Director demonstrating that a source other than the regulated units caused the increase or that the increase resulted from error in sampling, analysis, or evaluation;

(3) Within 90 days, submit to the Director an application for a permit modification to make any appropriate changes to the unsaturated zone monitoring program at the facility; and

(4) Continue to monitor in accordance with the unsaturated zone monitoring program established under Section R315-264-278.

R315-264-279. Recordkeeping.

The owner or operator shall include hazardous waste application dates and rates in the operating record required under Section R315-264-73.

R315-264-280. Closure and Post-Closure Care.

(a) During the closure period the owner or operator shall:

(1) Continue all operations, including pH control, necessary to maximize degradation, transformation, or immobilization of hazardous constituents within the treatment zone as required under Subsection R315-264-273(a), except to the extent such measures are inconsistent with Subsection R315-264-280(a)(8).

(2) Continue all operations in the treatment zone to minimize run-off of hazardous constituents as required under Subsection R315-264-273(b);

(3) Maintain the run-on control system required under Subsection R315-264-273(c);

(4) Maintain the run-off management system required under Subsection R315-264-273(d);

(5) Control wind dispersal of hazardous waste if required under Subsection R315-264-273(f);

(6) Continue to comply with any prohibitions or conditions concerning growth of food-chain crops under Section R315-264-276;

(7) Continue unsaturated zone monitoring in compliance with Section R315-264-278, except that soil-pore liquid monitoring may be terminated 90 days after the last application of waste to the treatment zone; and

(8) Establish a vegetative cover on the portion of the facility being closed at such time that the cover will not substantially impede degradation, transformation, or immobilization of hazardous constituents in the treatment zone. The vegetative cover shall be capable of maintaining growth without extensive maintenance.

(b) For the purpose of complying with Section R315-264-115, when closure is completed the owner or operator may submit to the Director certification by an independent, qualified soil scientist, in lieu of a qualified Professional Engineer, that the facility has been closed in accordance with the specifications in the approved closure plan.

(c) During the post-closure care period the owner or operator shall:

(1) Continue all operations, including pH control, necessary to enhance degradation and transformation and sustain immobilization of hazardous constituents in the treatment zone to the extent that such measures are consistent with other post-closure care activities;

(2) Maintain a vegetative cover over closed portions of the facility;

(3) Maintain the run-on control system required under Subsection R315-264-273(c);

(4) Maintain the run-off management system required under Subsection R315-264-273(d);

(5) Control wind dispersal of hazardous waste if required under Subsection R315-264-273(f);

(6) Continue to comply with any prohibitions or conditions concerning growth of food-chain crops under Section R315-264-276; and

(7) Continue unsaturated zone monitoring in compliance with Section R315-264-278, except that soil-pore liquid monitoring may be terminated 90 days after the last application of waste to the treatment zone.

(d) The owner or operator is not subject to regulation under Subsections R315-264-280(a)(8) and (c) if the Director finds that the level of hazardous constituents in the treatment zone soil does not exceed the background value of those constituents by an amount that is statistically significant when using the test specified in Subsection R315-264-280(d)(3). The owner or operator may submit such a demonstration to the

Director at any time during the closure or post-closure care periods. For the purposes of Subsection R315-264-280(d):

(1) The owner or operator shall establish background soil values and determine whether there is a statistically significant increase over those values for all hazardous constituents specified in the facility permit under Subsection R315-264-271(b).

(i) Background soil values may be based on a one-time sampling of a background plot having characteristics similar to those of the treatment zone.

(ii) The owner or operator shall express background values and values for hazardous constituents in the treatment zone in a form necessary for the determination of statistically significant increases under Subsection R315-264-280(d)(3).

(2) In taking samples used in the determination of background and treatment zone values, the owner or operator shall take samples at a sufficient number of sampling points and at appropriate locations and depths to yield samples that represent the chemical make-up of soil that has not been affected by leakage from the treatment zone and the soil within the treatment zone, respectively.

(3) In determining whether a statistically significant increase has occurred, the owner or operator shall compare the value of each constituent in the treatment zone to the background value for that constituent using a statistical procedure that provides reasonable confidence that constituent presence in the treatment zone will be identified. The owner or operator shall use a statistical procedure that:

(i) Is appropriate for the distribution of the data used to establish background values; and

(ii) Provides a reasonable balance between the probability of falsely identifying hazardous constituent presence in the treatment zone and the probability of failing to identify real presence in the treatment zone.

(e) The owner or operator is not subject to regulation under Sections R315-264-90 through 101 if the Director finds that the owner or operator satisfies Subsection R315-264-280(d) and if unsaturated zone monitoring under Section R315-264-278 indicates that hazardous constituents have not migrated beyond the treatment zone during the active life of the land treatment unit.

R315-264-281. Special Requirements for Ignitable or Reactive Waste.

The owner or operator shall not apply ignitable or reactive waste to the treatment zone unless the waste and the treatment zone meet all applicable requirements of Rule R315-268, and:

(a) The waste is immediately incorporated into the soil so that:

(1) The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under Sections R315-261-21 or 23; and

(2) Subsection R315-264-17(b) is complied with; or

(b) The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.

R315-264-282. Special Requirements for Incompatible Wastes.

The owner or operator shall not place incompatible wastes, or incompatible wastes and materials, see appendix V of Rule R315-264 for examples, in or on the same treatment zone, unless Subsection R315-264-17(b) is complied with.

R315-264-283. Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027.

(a) Hazardous Wastes F020, F021, F022, F023, F026, and F027 shall not be placed in a land treatment unit unless the owner or operator operates the facility in accordance with a

management plan for these wastes that is approved by the Director pursuant to the standards set out in Subsection R315-264-283(a), and in accord with all other applicable requirements of Rule R315-264. The factors to be considered are:

(1) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

(2) The attenuative properties of underlying and surrounding soils or other materials;

(3) The mobilizing properties of other materials co-disposed with these wastes; and

(4) The effectiveness of additional treatment, design, or monitoring techniques.

(b) The Director may determine that additional design, operating, and monitoring requirements are necessary for land treatment facilities managing hazardous wastes F020, F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to ground water, surface water, or air so as to protect human health and the environment.

R315-264-300. Landfills -- Applicability.

The regulations in Sections R315-264-300 through 317 apply to owners and operators of facilities that dispose of hazardous waste in landfills, except as Section R315-264-1 provides otherwise.

R315-264-301. Design and Operating Requirements.

(a) Any landfill that is not covered by Subsection R315-264-301(c) or 40 CFR 265.301(a), which is adopted by reference, shall have a liner system for all portions of the landfill, except for portions of such landfill that existed on or prior to October 10, 1984. The liner system shall have:

(1) A liner that is designed, constructed, and installed to prevent any migration of wastes out of the landfill to the adjacent subsurface soil or ground water or surface water at anytime during the active life, including the closure period, of the landfill. The liner shall be constructed of materials that prevent wastes from passing into the liner during the active life of the facility. The liner shall be:

(i) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients, including static head and external hydrogeologic forces, physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

(ii) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and

(iii) Installed to cover all surrounding earth likely to be in contact with the waste or leachate; and

(2) A leachate collection and removal system immediately above the liner that is designed, constructed, maintained, and operated to collect and remove leachate from the landfill. The Director shall specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 30 cm, one foot. The leachate collection and removal system shall be:

(i) Constructed of materials that are:

(A) Chemically resistant to the waste managed in the landfill and the leachate expected to be generated; and

(B) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and by any equipment used at the landfill; and

(ii) Designed and operated to function without clogging through the scheduled closure of the landfill.

(b) The owner or operator shall be exempted from the requirements of Subsection R315-264-301(a) if the Director finds, based on a demonstration by the owner or operator, that

alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents, see Section R315-264-93, into the ground water or surface water at any future time. In deciding whether to grant an exemption, the Director shall consider:

- (1) The nature and quantity of the wastes;
- (2) The proposed alternate design and operation;
- (3) The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils present between the landfill and ground water or surface water; and
- (4) All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.

(c) The owner or operator of each new landfill unit on which construction commences after January 29, 1992, each lateral expansion of a landfill unit on which construction commences after July 29, 1992, and each replacement of an existing landfill unit that is to commence reuse after July 29, 1992 shall install two or more liners and a leachate collection and removal system above and between such liners. "Construction commences" is as defined in Section R315-260-10 under "existing facility".

(1)(i) The liner system shall include:

(A) A top liner designed and constructed of materials, e.g., a geomembrane, to prevent the migration of hazardous constituents into such liner during the active life and post-closure care period; and

(B) A composite bottom liner, consisting of at least two components. The upper component shall be designed and constructed of materials, e.g., a geomembrane, to prevent the migration of hazardous constituents into this component during the active life and post-closure care period. The lower component shall be designed and constructed of materials to minimize the migration of hazardous constituents if a breach in the upper component were to occur. The lower component shall be constructed of at least 91 cm, 3 feet, of compacted soil material with a hydraulic conductivity of no more than 1×10^{-7} cm/sec.

(ii) The liners shall comply with Subsections R315-264-301(a)(1)(i), (ii), and (iii).

(2) The leachate collection and removal system immediately above the top liner shall be designed, constructed, operated, and maintained to collect and remove leachate from the landfill during the active life and post-closure care period. The Director shall specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 30 cm, one foot. The leachate collection and removal system shall comply with Subsections R315-264-301(c)(3)(iii) and (iv).

(3) The leachate collection and removal system between the liners, and immediately above the bottom composite liner in the case of multiple leachate collection and removal systems, is also a leak detection system. This leak detection system shall be capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and post-closure care period. The requirements for a leak detection system in Subsection R315-264-301(c) are satisfied by installation of a system that is, at a minimum:

(i) Constructed with a bottom slope of one percent or more;

(ii) Constructed of granular drainage materials with a hydraulic conductivity of 1×10^{-2} cm/sec or more and a thickness of 30.5 cm, 12 inches, or more; or constructed of synthetic or geonet drainage materials with a transmissivity of 3×10^{-5} m²/sec or more;

(iii) Constructed of materials that are chemically resistant to the waste managed in the landfill and the leachate expected

to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and equipment used at the landfill;

(iv) Designed and operated to minimize clogging during the active life and post-closure care period; and

(v) Constructed with sumps and liquid removal methods, e.g., pumps, of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit shall have its own sump(s). The design of each sump and removal system shall provide a method for measuring and recording the volume of liquids present in the sump and of liquids removed.

(4) The owner or operator shall collect and remove pumpable liquids in the leak detection system sumps to minimize the head on the bottom liner.

(5) The owner or operator of a leak detection system that is not located completely above the seasonal high water table shall demonstrate that the operation of the leak detection system will not be adversely affected by the presence of ground water.

(d) The Director may approve alternative design or operating practices to those specified in Subsection R315-264-301(c) if the owner or operator demonstrates to the Director that such design and operating practices, together with location characteristics:

(1) Will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as the liners and leachate collection and removal systems specified in Subsection R315-264-301(c); and

(2) Will allow detection of leaks of hazardous constituents through the top liner at least as effectively.

(e) The double liner requirement set forth in Subsection R315-264-301(c) may be waived by the Director for any monofill, if:

(1) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the Toxicity Characteristic in Section R315-261-24, with EPA Hazardous Waste Numbers D004 through D017; and

(2)(i)(A) The monofill has at least one liner for which there is no evidence that such liner is leaking;

(B) The monofill is located more than one-quarter mile from an "underground source of drinking water," as that term is defined in Section R315-270-2; and

(C) The monofill is in compliance with generally applicable ground-water monitoring requirements for facilities with permits under Section 19-6-108; or

(ii) The owner or operator demonstrates that the monofill is located, designed and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

(f) The owner or operator of any replacement landfill unit is exempt from Subsection R315-264-301(c) if:

(1) The existing unit was constructed in compliance with the design standards of section 3004(o)(1)(A)(i) and (o)(5) of the Resource Conservation and Recovery Act; and

(2) There is no reason to believe that the liner is not functioning as designed.

(g) The owner or operator shall design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during peak discharge from at least a 24-hour, 25-year storm.

(h) The owner or operator shall design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(i) Collection and holding facilities, e.g., tanks or basins, associated with run-on and run-off control systems shall be

emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.

(j) If the landfill contains any particulate matter which may be subject to wind dispersal, the owner or operator shall cover or otherwise manage the landfill to control wind dispersal.

(k) The Director shall specify in the permit all design and operating practices that are necessary to ensure that the requirements of Section R315-264-301 are satisfied.

R315-264-302. Action Leakage Rate.

(a) The Director shall approve an action leakage rate for landfill units subject to Subsections R315-264-301(c) or (d). The action leakage rate is the maximum design flow rate that the leak detection system can remove without the fluid head on the bottom liner exceeding 30.5 cm, 1 foot. The action leakage rate shall include an adequate safety margin to allow for uncertainties in the design, e.g., slope, hydraulic conductivity, thickness of drainage material, construction, operation, and location of the leak detection system, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the leak detection system, and proposed response actions, e.g., the action leakage rate shall consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.

(b) To determine if the action leakage rate has been exceeded, the owner or operator shall convert the weekly or monthly flow rate from the monitoring data obtained under Subsection R315-264-303(c) to an average daily flow rate, gallons per acre per day, for each sump. Unless the Director approves a different calculation, the average daily flow rate for each sump shall be calculated weekly during the active life and closure period, and monthly during the post-closure care period when monthly monitoring is required under Subsection R315-264-303(c).

R315-264-303. Monitoring and Inspection.

(a) During construction or installation, liners, except in the case of existing portions of landfills exempt from Subsection R315-264-301(a) and cover systems, e.g., membranes, sheets, or coatings, shall be inspected for uniformity, damage, and imperfections, e.g., holes, cracks, thin spots, or foreign materials. Immediately after construction or installation:

(1) Synthetic liners and covers shall be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters; and

(2) Soil-based and admixed liners and covers shall be inspected for imperfections including lenses, cracks, channels, root holes, or other structural non-uniformities that may cause an increase in the permeability of the liner or cover.

(b) While a landfill is in operation, it shall be inspected weekly and after storms to detect evidence of any of the following:

(1) Deterioration, malfunctions, or improper operation of run-on and run-off control systems;

(2) Proper functioning of wind dispersal control systems, where present; and

(3) The presence of leachate in and proper functioning of leachate collection and removal systems, where present.

(c)(1) An owner or operator required to have a leak detection system under Subsection R315-264-301(c) or (d) shall record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.

(2) After the final cover is installed, the amount of liquids removed from each leak detection system sump shall be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for two consecutive months, the amount of liquids in the sumps shall be recorded at least

quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps shall be recorded at least semi-annually. If at any time during the post-closure care period the pump operating level is exceeded at units on quarterly or semi-annual recording schedules, the owner or operator shall return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.

(3) "Pump operating level" is a liquid level proposed by the owner or operator and approved by the Director based on pump activation level, sump dimensions, and level that avoids backup into the drainage layer and minimizes head in the sump.

R315-264-304. Response Actions.

(a) The owner or operator of landfill units subject to Subsections R315-264-301(c) or (d) shall have an approved response action plan before receipt of waste. The response action plan shall set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan shall describe the actions specified in Subsection R315-264-304(b).

(b) If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator shall:

(1) Notify the Director in writing of the exceedance within 7 days of the determination;

(2) Submit a preliminary written assessment to the Director within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;

(3) Determine to the extent practicable the location, size, and cause of any leak;

(4) Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;

(5) Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and

(6) Within 30 days after the notification that the action leakage rate has been exceeded, submit to the Director the results of the analyses specified in Subsections R315-264-304(b)(3), (4), and (5), the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator shall submit to the Director a report summarizing the results of any remedial actions taken and actions planned.

(c) To make the leak and/or remediation determinations in Subsections R315-264-304(b)(3), (4), and (5), the owner or operator shall:

(1)(i) Assess the source of liquids and amounts of liquids by source,

(ii) Conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and

(iii) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or

(2) Document why such assessments are not needed.

R315-264-309. Surveying and Recordkeeping.

The owner or operator of a landfill shall maintain the following items in the operating record required under Section R315-264-73:

(a) On a map, the exact location and dimensions, including depth, of each cell with respect to permanently surveyed benchmarks; and

(b) The contents of each cell and the approximate location of each hazardous waste type within each cell.

R315-264-310. Closure and Post-Closure Care.

(a) At final closure of the landfill or upon closure of any cell, the owner or operator shall cover the landfill or cell with a final cover designed and constructed to:

- (1) Provide long-term minimization of migration of liquids through the closed landfill;
- (2) Function with minimum maintenance;
- (3) Promote drainage and minimize erosion or abrasion of the cover;
- (4) Accommodate settling and subsidence so that the cover's integrity is maintained; and
- (5) Have a permeability less than or equal to the permeability of any bottom liner system or natural soils present.

(b) After final closure, the owner or operator shall comply with all post-closure requirements contained in Sections R315-264-117 through 120, including maintenance and monitoring throughout the post-closure care period, specified in the permit under Section R315-264-117. The owner or operator shall:

- (1) Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events;
- (2) Continue to operate the leachate collection and removal system until leachate is no longer detected;
- (3) Maintain and monitor the leak detection system in accordance with Subsections R315-264-301(c)(3)(iv) and (4) and R315-264-303(c), and comply with all other applicable leak detection system requirements of Rul3 R315-264;
- (4) Maintain and monitor the ground-water monitoring system and comply with all other applicable requirements of Sections R315-264-90 through 101;
- (5) Prevent run-on and run-off from eroding or otherwise damaging the final cover; and
- (6) Protect and maintain surveyed benchmarks used in complying with Section R315-264-309.

R315-264-312. Special Requirements for Ignitable or Reactive Waste.

(a) Except as provided in Subsection R315-264-312(b), and in Section R316-264-316, ignitable or reactive waste shall not be placed in a landfill, unless the waste and landfill meet all applicable requirements of Rule R315-268, and:

- (1) The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under Sections R315-261-21 or 23; and
- (2) Subsection R315-264-17(b) is complied with.

(b) Except for prohibited wastes which remain subject to treatment standards in Sections R315-268-40 through 49, ignitable wastes in containers may be landfilled without meeting the requirements of Subsection R315-264-312(a), provided that the wastes are disposed of in such a way that they are protected from any material or conditions which may cause them to ignite. At a minimum, ignitable wastes shall be disposed of in non-leaking containers which are carefully handled and placed so as to avoid heat, sparks, rupture, or any other condition that might cause ignition of the wastes; shall be covered daily with soil or other non-combustible material to minimize the potential for ignition of the wastes; and shall not be disposed of in cells that contain or will contain other wastes which may generate heat sufficient to cause ignition of the waste.

R315-264-313. Special Requirements for Incompatible Wastes.

Incompatible wastes, or incompatible wastes and materials, (see appendix V of Rule R315-264 for examples) shall not be placed in the same landfill cell, unless Subsection R315-264-17(b) is complied with.

R315-264-314. Special Requirements for Bulk and Containerized Liquids.

(a) The placement of bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids, whether or not sorbents have been added, in any landfill is prohibited.

(b) To demonstrate the absence or presence of free liquids in either a containerized or a bulk waste, the following test shall be used: Method 9095B, Paint Filter Liquids Test, as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section R315-260-11.

(c) Containers holding free liquids shall not be placed in a landfill unless:

- (1) All free-standing liquid:
 - (i) Has been removed by decanting, or other methods;
 - (ii) Has been mixed with sorbent or solidified so that free-standing liquid is no longer observed; or
 - (iii) Has been otherwise eliminated; or
- (2) The container is very small, such as an ampule; or
- (3) The container is designed to hold free liquids for use other than storage, such as a battery or capacitor; or
- (4) The container is a lab pack as defined in Section R316-264-316 and is disposed of in accordance with Section R316-264-316.

(d) Sorbents used to treat free liquids to be disposed of in landfills shall be nonbiodegradable. Nonbiodegradable sorbents are: materials listed or described in Subsection R315-264-314(d)(1); materials that pass one of the tests in Subsection R315-264-314(d)(2); or materials that are determined by the Director to be nonbiodegradable through the Rule R315-260 petition process.

- (1) Nonbiodegradable sorbents.
 - (i) Inorganic minerals, other inorganic materials, and elemental carbon, e.g., aluminosilicates, clays, smectites, Fuller's earth, bentonite, calcium bentonite, montmorillonite, calcined montmorillonite, kaolinite, micas - illite, vermiculites, zeolites; calcium carbonate (organic free limestone; oxides/hydroxides, alumina, lime, silica - sand, diatomaceous earth; perlite - volcanic glass; expanded volcanic rock; volcanic ash; cement kiln dust; fly ash; rice hull ash; activated charcoal/activated carbon; or
 - (ii) High molecular weight synthetic polymers, e.g., polyethylene, high density polyethylene (HDPE), polypropylene, polystyrene, polyurethane, polyacrylate, polynorborene, polyisobutylene, ground synthetic rubber, cross-linked allylstyrene and tertiary butyl copolymers. This does not include polymers derived from biological material or polymers specifically designed to be degradable; or
 - (iii) Mixtures of these nonbiodegradable materials.
- (2) Tests for nonbiodegradable sorbents.
 - (i) The sorbent material is determined to be nonbiodegradable under ASTM Method G21-70 (1984a)-Standard Practice for Determining Resistance of Synthetic Polymer Materials to Fungi; or
 - (ii) The sorbent material is determined to be nonbiodegradable under ASTM Method G22-76 (1984b)-Standard Practice for Determining Resistance of Plastics to Bacteria; or
 - (iii) The sorbent material is determined to be nonbiodegradable under OECD test 301B: CO2 Evolution - Modified Sturm Test.

(e) The placement of any liquid which is not a hazardous waste in a landfill is prohibited unless the owner or operator of such landfill demonstrates to the Director, or the Director determines that:

- (1) The only reasonably available alternative to the placement in such landfill is placement in a landfill or unlined surface impoundment, whether or not permitted or operating

under interim status, which contains, or may reasonably be anticipated to contain, hazardous waste; and

(2) Placement in such owner or operator's landfill will not present a risk of contamination of any "underground source of drinking water," as that term is defined in Section R315-270-2.

R315-264-315. Special Requirements for Containers.

Unless they are very small, such as an ampule, containers shall be either:

- (a) At least 90 percent full when placed in the landfill; or
- (b) Crushed, shredded, or similarly reduced in volume to the maximum practical extent before burial in the landfill.

R315-264-316. Disposal of Small Containers of Hazardous Waste in Overpacked Drums (Lab Packs).

Small containers of hazardous waste in overpacked drums, lab packs, may be placed in a landfill if the following requirements are met:

(a) Hazardous waste shall be packaged in non-leaking inside containers. The inside containers shall be of a design and constructed of a material that will not react dangerously with, be decomposed by, or be ignited by the contained waste. Inside containers shall be tightly and securely sealed. The inside containers shall be of the size and type specified in the Department of Transportation hazardous materials regulations, 49 CFR parts 173, 178, and 179, if those regulations specify a particular inside container for the waste.

(b) The inside containers shall be overpacked in an open head Department of Transportation-specification metal shipping container, 49 CFR parts 178 and 179, of no more than 416-liter, 110 gallon, capacity and surrounded by, at a minimum, a sufficient quantity of sorbent material, determined to be nonbiodegradable in accordance with Subsection R315-264-314(d), to completely sorb all of the liquid contents of the inside containers. The metal outer container shall be full after it has been packed with inside containers and sorbent material.

(c) The sorbent material used shall not be capable of reacting dangerously with, being decomposed by, or being ignited by the contents of the inside containers, in accordance with Subsection R315-264-17(b).

(d) Incompatible wastes, as defined in Section R315-260-10, shall not be placed in the same outside container.

(e) Reactive wastes, other than cyanide- or sulfide-bearing waste as defined in Subsection R315-261-23(a)(5), shall be treated or rendered non-reactive prior to packaging in accordance with Subsections R315-264-316(a) through (d). Cyanide- and sulfide-bearing reactive waste may be packed in accordance with Subsections R315-264-316(a) through (d) without first being treated or rendered non-reactive.

(f) Such disposal is in compliance with the requirements of Rule R315-268. Persons who incinerate lab packs according to the requirements in Subsection R315-268-42(c)(1) may use fiber drums in place of metal outer containers. Such fiber drums shall meet the Department of Transportation specifications in 49 CFR 173.12 and be overpacked according to the requirements in Subsection R315-264-316(b).

R315-264-317. Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027.

(a) Hazardous Wastes F020, F021, F022, F023, F026, and F027 shall not be placed in a landfill unless the owner or operator operates the landfill in accord with a management plan for these wastes that is approved by the Director pursuant to the standards set out in Section R315-264-317, and in accord with all other applicable requirements of Rule R315-264. The factors to be considered are:

(1) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through the soil or to volatilize or escape into the atmosphere;

(2) The attenuative properties of underlying and surrounding soils or other materials;

(3) The mobilizing properties of other materials co-disposed with these wastes; and

(4) The effectiveness of additional treatment, design, or monitoring requirements.

(b) The Director may determine that additional design, operating, and monitoring requirements are necessary for landfills managing hazardous wastes F020, F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to ground water, surface water, or air so as to protect human health and the environment.

R315-264-340. Incinerator -- Applicability.

(a) The regulations of Sections R315-264-340 through 351 apply to owners and operators of hazardous waste incinerators, as defined in Section R315-260-10, except as Section R315-264-1 provides otherwise.

(b) Integration of the MACT standards.

(1) Except as provided by Subsections R315-264-340(b)(2) through (b)(4), the standards of Rule R315-264 do not apply to a new hazardous waste incineration unit that becomes subject to RCRA permit requirements after October 12, 2005; or no longer apply when an owner or operator of an existing hazardous waste incineration unit demonstrates compliance with the maximum achievable control technology (MACT) requirements of Section R307-214-2 by conducting a comprehensive performance test and submitting to the Director a Notification of Compliance under Section R307-14-2 documenting compliance with the requirements of Section R307-14-2. Nevertheless, even after this demonstration of compliance with the MACT standards, RCRA permit conditions that were based on the standards of Rule R315-264 shall continue to be in effect until they are removed from the permit or the permit is terminated or revoked, unless the permit expressly provides otherwise.

(2) The MACT standards do not replace the closure requirements of Section R315-264-351 or the applicable requirements of Sections R315-264-1 through 4, 10 through 19, 30 through 37, 50 through 56, 70 through 77, 90 through 101, 110 through 120, 140 through 151, 1050 through 1065 and 1080 through 1090.

(3) The particulate matter standard of Subsection R315-264-343(c) remains in effect for incinerators that elect to comply with the alternative to the particulate matter standard under Section R307-214-2.

(4) The following requirements remain in effect for startup, shutdown, and malfunction events if you elect to comply with Subsection R35-270-235(a)(1)(i) to minimize emissions of toxic compounds from these events:

(i) Subsection R315-264-345(a) requiring that an incinerator operate in accordance with operating requirements specified in the permit; and

(ii) Subsection R315-264-345(c) requiring compliance with the emission standards and operating requirements during startup and shutdown if hazardous waste is in the combustion chamber, except for particular hazardous wastes.

(c) After consideration of the waste analysis included with part B of the permit application, the Director, in establishing the permit conditions, shall exempt the applicant from all requirements of Sections R315-264-340 through 351 except Section R315-264-341, Waste analysis, and Section R315-264-351, Closure,

(1) If the Director finds that the waste to be burned is:

(i) Listed as a hazardous waste in Sections R315-261-30 through 35 solely because it is ignitable, Hazard Code I, corrosive, Hazard Code C, or both; or

(ii) Listed as a hazardous waste in Sections R315-261-30 through 35 solely because it is reactive, Hazard Code R, for

characteristics other than those listed in Subsections R315-261-23(a)(4) and (5), and will not be burned when other hazardous wastes are present in the combustion zone; or

(iii) A hazardous waste solely because it possesses the characteristic of ignitability, corrosivity, or both, as determined by the test for characteristics of hazardous wastes under Sections R315-261-20 through 24; or

(iv) A hazardous waste solely because it possesses any of the reactivity characteristics described by Subsections R315-261-23(a)(1), (2), (3), (6), (7), and (8), and will not be burned when other hazardous wastes are present in the combustion zone; and

(2) If the waste analysis shows that the waste contains none of the hazardous constituents listed in Rule R315-261, appendix VIII, which would reasonably be expected to be in the waste.

(d) If the waste to be burned is one which is described by Subsections R315-264-340(b)(1)(i), (ii), (iii), or (iv) and contains insignificant concentrations of the hazardous constituents listed in Rule R315-261, appendix VIII, then the Director may, in establishing permit conditions, exempt the applicant from all requirements of Sections R315-264-340 through 351, except Section R315-264-341, Waste analysis, and Section R315-264-351, Closure, after consideration of the waste analysis included with part B of the permit application, unless the Director finds that the waste will pose a threat to human health and the environment when burned in an incinerator.

(e) The owner or operator of an incinerator may conduct trial burns subject only to the requirements of Section R315-270-62, Short term and incinerator permits.

R315-264-341. Waste Analysis.

(a) As a portion of the trial burn plan required by Section R315-270-62, or with part B of the permit application, the owner or operator shall have included an analysis of the waste feed sufficient to provide all information required by Subsection R315-270-62(b) or Section R315-270-19. Owners or operators of new hazardous waste incinerators shall provide the information required by Subsection R315-270-62(c) or Section R315-270-19 to the greatest extent possible.

(b) Throughout normal operation the owner or operator shall conduct sufficient waste analysis to verify that waste feed to the incinerator is within the physical and chemical composition limits specified in his permit, under Subsection R315-264-345(b).

R315-264-342. Principal Organic Hazardous Constituents.

(a) Principal organic hazardous constituents in the waste feed shall be treated to the extent required by the performance standard of Section R315-264-343.

(b)(1) One or more principal organic hazardous constituents shall be specified in the facility's permit, from among those constituents listed in appendix VIII of Rule R315-261 for each waste feed to be burned. This specification shall be based on the degree of difficulty of incineration of the organic constituents in the waste and on their concentration or mass in the waste feed, considering the results of waste analyses and trial burns or alternative data submitted with part B of the facility's permit application. Organic constituents which represent the greatest degree of difficulty of incineration will be those most likely to be designated as principal organic hazardous constituents. Constituents are more likely to be designated as principal organic hazardous constituents if they are present in large quantities or concentrations in the waste.

(2) Trial principal organic hazardous constituents shall be designated for performance of trial burns in accordance with the procedure specified in Section R315-270-62 for obtaining trial burn permits.

R315-264-343. Performance Standards.

An incinerator burning hazardous waste shall be designed, constructed, and maintained so that, when operated in accordance with operating requirements specified under Section R315-264-345, it shall meet the following performance standards:

(a)(1) Except as provided in Subsection R315-264-343(a)(2), an incinerator burning hazardous waste shall achieve a destruction and removal efficiency of 99.99% for each principal organic hazardous constituent designated, under Section R315-264-342, in its permit for each waste feed. Destruction and removal efficiency is determined for each principal organic hazardous constituent from the following equation:

$$\text{Destruction and removal efficiency} = ((\text{Win} - \text{Wout})/\text{Win}) \times 100\%$$

where:

Win = mass feed rate of one principal organic hazardous constituent in the waste stream feeding the incinerator and

Wout = mass emission rate of the same principal organic hazardous constituent present in exhaust emissions prior to release to the atmosphere.

(2) An incinerator burning hazardous wastes F020, F021, F022, F023, F026, or F027 shall achieve a destruction and removal efficiency of 99.9999% for each principal organic hazardous constituent designated, under Section R315-264-342, in its permit. This performance shall be demonstrated on principal organic hazardous constituents that are more difficult to incinerate than tetra-, penta-, and hexachlorodibenzo-p-dioxins and dibenzofurans. Destruction and removal efficiency is determined for each principal organic hazardous constituent from the equation in Subsection R315-264-343(a)(1).

(b) An incinerator burning hazardous waste and producing stack emissions of more than 1.8 kilograms per hour, 4 pounds per hour, of hydrogen chloride shall control hydrogen chloride emissions such that the rate of emission is no greater than the larger of either 1.8 kilograms per hour or 1% of the hydrogen chloride in the stack gas prior to entering any pollution control equipment.

(c) An incinerator burning hazardous waste shall not emit particulate matter in excess of 180 milligrams per dry standard cubic meter, 0.08 grains per dry standard cubic foot, when corrected for the amount of oxygen in the stack gas according to the formula:

$$P_c = P_m \times (14/(21-Y))$$

Where P_c is the corrected concentration of particulate matter, P_m is the measured concentration of particulate matter, and Y is the measured concentration of oxygen in the stack gas, using the Orsat method for oxygen analysis of dry flue gas, presented in 40 CFR 60, appendix A Method 3, which is adopted and incorporated by Section R307-221-3. This correction procedure is to be used by all hazardous waste incinerators except those operating under conditions of oxygen enrichment. For these facilities, the Director shall select an appropriate correction procedure, to be specified in the facility permit.

(d) For purposes of permit enforcement, compliance with the operating requirements specified in the permit, under Section R315-264-345, shall be regarded as compliance with Section R315-264-343. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the performance requirements of Section R315-264-343 may be "information" justifying modification, revocation, or reissuance of a permit under Section R315-270-41.

R315-264-344. Hazardous Waste Incinerator Permits.

(a) The owner or operator of a hazardous waste incinerator may burn only wastes specified in his permit and only under

operating conditions specified for those wastes under Section R315-264-345, except:

- (1) In approved trial burns under Section R315-270-62; or
- (2) Under exemptions created by Section R315-264-340.

(b) Other hazardous wastes may be burned only after operating conditions have been specified in a new permit or a permit modification as applicable. Operating requirements for new wastes may be based on either trial burn results or alternative data included with part B of a permit application under Section R315-270-19.

(c) The permit for a new hazardous waste incinerator shall establish appropriate conditions for each of the applicable requirements of Sections R315-264-340 through 351, including but not limited to allowable waste feeds and operating conditions necessary to meet the requirements of Section R315-264-345, sufficient to comply with the following standards:

(1) For the period beginning with initial introduction of hazardous waste to the incinerator and ending with initiation of the trial burn, and only for the minimum time required to establish operating conditions required in Subsection R315-264-344(c)(2), not to exceed a duration of 720 hours operating time for treatment of hazardous waste, the operating requirements shall be those most likely to ensure compliance with the performance standards of Section R315-264-343, based on the Director's engineering judgment. The Director may extend the duration of this period once for up to 720 additional hours when good cause for the extension is demonstrated by the applicant.

(2) For the duration of the trial burn, the operating requirements shall be sufficient to demonstrate compliance with the performance standards of Section R315-264-343 and shall be in accordance with the approved trial burn plan;

(3) For the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis, data computation, and submission of the trial burn results by the applicant, and review of the trial burn results and modification of the facility permit by the Director, the operating requirements shall be those most likely to ensure compliance with the performance standards of Section R315-264-343, based on the Director's engineering judgment.

(4) For the remaining duration of the permit, the operating requirements shall be those demonstrated, in a trial burn or by alternative data specified in Subsection R315-270-19(c), as sufficient to ensure compliance with the performance standards of Section R315-264-343.

R315-264-345. Operating Requirements.

(a) An incinerator shall be operated in accordance with operating requirements specified in the permit. These shall be specified on a case-by-case basis as those demonstrated, in a trial burn or in alternative data as specified in Subsection R315-264-344(b) and included with part B of a facility's permit application, to be sufficient to comply with the performance standards of Section R315-264-343.

(b) Each set of operating requirements shall specify the composition of the waste feed, including acceptable variations in the physical or chemical properties of the waste feed which will not affect compliance with the performance requirement of Section R315-264-343, to which the operating requirements apply. For each such waste feed, the permit shall specify acceptable operating limits including the following conditions:

- (1) Carbon monoxide level in the stack exhaust gas;
- (2) Waste feed rate;
- (3) Combustion temperature;
- (4) An appropriate indicator of combustion gas velocity;
- (5) Allowable variations in incinerator system design or operating procedures; and

(6) Such other operating requirements as are necessary to ensure that the performance standards of Section R315-264-343 are met.

(c) During start-up and shut-down of an incinerator, hazardous waste, except wastes exempted in accordance with Section R315-264-340, shall not be fed into the incinerator unless the incinerator is operating within the conditions of operation, temperature, air feed rate, etc., specified in the permit.

(d) Fugitive emissions from the combustion zone shall be controlled by:

(1) Keeping the combustion zone totally sealed against fugitive emissions; or

(2) Maintaining a combustion zone pressure lower than atmospheric pressure; or

(3) An alternate means of control demonstrated, with part B of the permit application, to provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure.

(e) An incinerator shall be operated with a functioning system to automatically cut off waste feed to the incinerator when operating conditions deviate from limits established under Subsection R315-264-345(a).

(f) An incinerator shall cease operation when changes in waste feed, incinerator design, or operating conditions exceed limits designated in its permit.

R315-264-347. Monitoring and Inspections.

(a) The owner or operator shall conduct, as a minimum, the following monitoring while incinerating hazardous waste:

(1) Combustion temperature, waste feed rate, and the indicator of combustion gas velocity specified in the facility permit shall be monitored on a continuous basis.

(2) Carbon monoxide shall be monitored on a continuous basis at a point in the incinerator downstream of the combustion zone and prior to release to the atmosphere.

(3) Upon request by the Director, sampling and analysis of the waste and exhaust emissions shall be conducted to verify that the operating requirements established in the permit achieve the performance standards of Section R315-264-343.

(b) The incinerator and associated equipment, pumps, valves, conveyors, pipes, etc., shall be subjected to thorough visual inspection, at least daily, for leaks, spills, fugitive emissions, and signs of tampering.

(c) The emergency waste feed cutoff system and associated alarms shall be tested at least weekly to verify operability, unless the applicant demonstrates to the Director that weekly inspections will unduly restrict or upset operations and that less frequent inspection will be adequate. At a minimum, operational testing shall be conducted at least monthly.

(d) This monitoring and inspection data shall be recorded and the records shall be placed in the operating record required by Section R315-264-73 and maintained in the operating record for five years.

R315-264-351. Closure.

At closure the owner or operator shall remove all hazardous waste and hazardous waste residues, including, but not limited to, ash, scrubber waters, and scrubber sludges, from the incinerator site.

At closure, as throughout the operating period, unless the owner or operator can demonstrate, in accordance with Subsection R315-261-3(d), that the residue removed from the incinerator is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and shall manage it in accordance with applicable requirements of Rules R315-262 through 266.

R315-264-550. Applicability of Corrective Action Management Unit (CAMU) Regulations.

(a) Except as provided in Subsection R315-264-550(b), CAMUs are subject to the requirements of Section R315-264-

552.

(b) CAMUs that were approved before April 22, 2002, or for which substantially complete applications (or equivalents) were submitted to the Agency on or before November 20, 2000, are subject to the requirements in Section R315-264-551 for grandfathered CAMUs; CAMU waste, activities, and design shall not be subject to the standards in Section R315-264-552, so long as the waste, activities, and design remain within the general scope of the CAMU as approved.

R315-264-551. Grandfathered Corrective Action Management Units (CAMUs).

(a) To implement remedies under Section R315-264-101 or RCRA Section 3008(h), or to implement remedies at a permitted facility that is not subject to Section R315-264-101, the Director may designate an area at the facility as a corrective action management unit under the requirements in Section R315-264-551. Corrective action management unit means an area within a facility that is used only for managing remediation wastes for implementing corrective action or cleanup at the facility. A CAMU shall be located within the contiguous property under the control of the owner or operator where the wastes to be managed in the CAMU originated. One or more CAMUs may be designated at a facility.

(1) Placement of remediation wastes into or within a CAMU does not constitute land disposal of hazardous wastes.

(2) Consolidation or placement of remediation wastes into or within a CAMU does not constitute creation of a unit subject to minimum technology requirements.

(b)(1) The Director may designate a regulated unit, as defined in Subsection R315-264-90(a)(2), as a CAMU, or may incorporate a regulated unit into a CAMU, if:

(i) The regulated unit is closed or closing, meaning it has begun the closure process under Section R315-264-113 or 40 CFR 265.113, which is adopted by reference; and

(ii) Inclusion of the regulated unit will enhance implementation of effective, protective and reliable remedial actions for the facility.

(2) The requirements of Sections R315-264-90 through 101, 110 through 120, and 140 through 151 and the unit-specific requirements of Rules R315-264 or 265 that applied to that regulated unit shall continue to apply to that portion of the CAMU after incorporation into the CAMU.

(c) The Director shall designate a CAMU in accordance with the following:

(1) The CAMU shall facilitate the implementation of reliable, effective, protective, and cost-effective remedies;

(2) Waste management activities associated with the CAMU shall not create unacceptable risks to humans or to the environment resulting from exposure to hazardous wastes or hazardous constituents;

(3) The CAMU shall include uncontaminated areas of the facility, only if including such areas for the purpose of managing remediation waste is more protective than management of such wastes at contaminated areas of the facility;

(4) Areas within the CAMU, where wastes remain in place after closure of the CAMU, shall be managed and contained so as to minimize future releases, to the extent practicable;

(5) The CAMU shall expedite the timing of remedial activity implementation, when appropriate and practicable;

(6) The CAMU shall enable the use, when appropriate, of treatment technologies, including innovative technologies, to enhance the long-term effectiveness of remedial actions by reducing the toxicity, mobility, or volume of wastes that will remain in place after closure of the CAMU; and

(7) The CAMU shall, to the extent practicable, minimize the land area of the facility upon which wastes will remain in place after closure of the CAMU.

(d) The owner/operator shall provide sufficient

information to enable the Director to designate a CAMU in accordance with the criteria in Section R315-264-552.

(e) The Director shall specify, in the permit or order, requirements for CAMUs to include the following:

(1) The areal configuration of the CAMU.

(2) Requirements for remediation waste management to include the specification of applicable design, operation and closure requirements.

(3) Requirements for ground water monitoring that are sufficient to:

(i) Continue to detect and to characterize the nature, extent, concentration, direction, and movement of existing releases of hazardous constituents in ground water from sources located within the CAMU; and

(ii) Detect and subsequently characterize releases of hazardous constituents to ground water that may occur from areas of the CAMU in which wastes will remain in place after closure of the CAMU.

(4) Closure and post-closure requirements.

(i) Closure of corrective action management units shall:

(A) Minimize the need for further maintenance; and

(B) Control, minimize, or eliminate, to the extent necessary to protect human health and the environment, for areas where wastes remain in place, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground, to surface waters, or to the atmosphere.

(ii) Requirements for closure of CAMUs shall include the following, as appropriate and as deemed necessary by the Director for a given CAMU:

(A) Requirements for excavation, removal, treatment or containment of wastes;

(B) For areas in which wastes will remain after closure of the CAMU, requirements for capping of such areas; and

(C) Requirements for removal and decontamination of equipment, devices, and structures used in remediation waste management activities within the CAMU.

(iii) In establishing specific closure requirements for CAMUs under Subsection R315-264-552(e), the Director shall consider the following factors:

(A) CAMU characteristics;

(B) Volume of wastes which remain in place after closure;

(C) Potential for releases from the CAMU;

(D) Physical and chemical characteristics of the waste;

(E) Hydrological and other relevant environmental conditions at the facility which may influence the migration of any potential or actual releases; and

(F) Potential for exposure of humans and environmental receptors if releases were to occur from the CAMU.

(iv) Post-closure requirements as necessary to protect human health and the environment, to include, for areas where wastes will remain in place, monitoring and maintenance activities, and the frequency with which such activities shall be performed to ensure the integrity of any cap, final cover, or other containment system.

(f) The Director shall document the rationale for designating CAMUs and shall make such documentation available to the public.

(g) Incorporation of a CAMU into an existing permit shall be approved by the Director according to the procedures for permit modifications under Section R315-270-41, or according to the permit modification procedures of Section R315-270-42.

(h) The designation of a CAMU does not change the Director's existing authority to address clean-up levels, media-specific points of compliance to be applied to remediation at a facility, or other remedy selection decisions.

R315-264-552. Corrective Action Management Units (CAMU).

(a) To implement remedies under Subsection R315-264-101 or RCRA Section 3008(h), or to implement remedies at a permitted facility that is not subject to Subsection R315-264-101, the Director may designate an area at the facility as a corrective action management unit under the requirements in Section R315-264-552. Corrective action management unit means an area within a facility that is used only for managing CAMU-eligible wastes for implementing corrective action or cleanup at the facility. A CAMU shall be located within the contiguous property under the control of the owner or operator where the wastes to be managed in the CAMU originated. One or more CAMUs may be designated at a facility.

(1) CAMU-eligible waste means:

(i) All solid and hazardous wastes, and all media, including ground water, surface water, soils, and sediments, and debris, that are managed for implementing cleanup. As-generated wastes, either hazardous or non-hazardous, from ongoing industrial operations at a site are not CAMU-eligible wastes.

(ii) Wastes that would otherwise meet the description in Subsection R315-264-552(a)(1)(i) are not "CAMU-Eligible Wastes" where:

(A) The wastes are hazardous wastes found during cleanup in intact or substantially intact containers, tanks, or other non-land-based units found above ground, unless the wastes are first placed in the tanks, containers or non-land-based units as part of cleanup, or the containers or tanks are excavated during the course of cleanup; or

(B) The Director exercises the discretion in Subsection R315-264-552(a)(2) to prohibit the wastes from management in a CAMU.

(iii) Notwithstanding Subsection R315-264-552(a)(1)(i), where appropriate, as-generated non-hazardous waste may be placed in a CAMU where such waste is being used to facilitate treatment or the performance of the CAMU.

(2) The Director may prohibit, where appropriate, the placement of waste in a CAMU where the Director has or receives information that such wastes have not been managed in compliance with applicable land disposal treatment standards of Rule R315-268, or applicable unit design requirements of Rule R315-264, or applicable unit design requirements of Rule R315-265, or that non-compliance with other applicable requirements of Rules R315-260 through 266, 268, 270 and 273 likely contributed to the release of the waste.

(3) Prohibition against placing liquids in CAMUs.

(i) The placement of bulk or noncontainerized liquid hazardous waste or free liquids contained in hazardous waste, whether or not sorbents have been added, in any CAMU is prohibited except where placement of such wastes facilitates the remedy selected for the waste.

(ii) The requirements in Subsection R315-264-314(c) for placement of containers holding free liquids in landfills apply to placement in a CAMU except where placement facilitates the remedy selected for the waste.

(iii) The placement of any liquid which is not a hazardous waste in a CAMU is prohibited unless such placement facilitates the remedy selected for the waste or a demonstration is made pursuant to Subsection R315-264-314(e).

(iv) The absence or presence of free liquids in either a containerized or a bulk waste shall be determined in accordance with Subsection R315-264-314(b). Sorbents used to treat free liquids in CAMUs shall meet the requirements of Subsection R315-264-314(d).

(4) Placement of CAMU-eligible wastes into or within a CAMU does not constitute land disposal of hazardous wastes.

(5) Consolidation or placement of CAMU-eligible wastes into or within a CAMU does not constitute creation of a unit subject to minimum technology requirements.

(b)(1) The Director may designate a regulated unit, as

defined in Subsection R315-264-90(a)(2), as a CAMU, or may incorporate a regulated unit into a CAMU, if:

(i) The regulated unit is closed or closing, meaning it has begun the closure process under Section R315-264-113 or 40 CFR 265.113, which is adopted by reference; and

(ii) Inclusion of the regulated unit will enhance implementation of effective, protective and reliable remedial actions for the facility.

(2) The requirements of Sections R315-264-90 through 101, 110 through 120, and 140 through 151 and the unit-specific requirements of Rules R315-264 or 265 that applied to the regulated unit shall continue to apply to that portion of the CAMU after incorporation into the CAMU.

(c) The Director shall designate a CAMU that will be used for storage and/or treatment only in accordance with Subsection R315-264-552(f). The Director shall designate all other CAMUs in accordance with the following:

(1) The CAMU shall facilitate the implementation of reliable, effective, protective, and cost-effective remedies;

(2) Waste management activities associated with the CAMU shall not create unacceptable risks to humans or to the environment resulting from exposure to hazardous wastes or hazardous constituents;

(3) The CAMU shall include uncontaminated areas of the facility, only if including such areas for the purpose of managing CAMU-eligible waste is more protective than management of such wastes at contaminated areas of the facility;

(4) Areas within the CAMU, where wastes remain in place after closure of the CAMU, shall be managed and contained so as to minimize future releases, to the extent practicable;

(5) The CAMU shall expedite the timing of remedial activity implementation, when appropriate and practicable;

(6) The CAMU shall enable the use, when appropriate, of treatment technologies, including innovative technologies, to enhance the long-term effectiveness of remedial actions by reducing the toxicity, mobility, or volume of wastes that will remain in place after closure of the CAMU; and

(7) The CAMU shall, to the extent practicable, minimize the land area of the facility upon which wastes will remain in place after closure of the CAMU.

(d) The owner/operator shall provide sufficient information to enable the Director to designate a CAMU in accordance with the criteria in Section R315-264-552. This shall include, unless not reasonably available, information on:

(1) The origin of the waste and how it was subsequently managed, including a description of the timing and circumstances surrounding the disposal and/or release;

(2) Whether the waste was listed or identified as hazardous at the time of disposal and/or release; and

(3) Whether the disposal and/or release of the waste occurred before or after the land disposal requirements of Rule R315-268 were in effect for the waste listing or characteristic.

(e) The Director shall specify, in the permit or order, requirements for CAMUs to include the following:

(1) The areal configuration of the CAMU.

(2) Except as provided in Subsection R315-264-552(g), requirements for CAMU-eligible waste management to include the specification of applicable design, operation, treatment and closure requirements.

(3) Minimum design requirements. CAMUs, except as provided in Subsection R315-264-552(f), into which wastes are placed shall be designed in accordance with the following:

(i) Unless the Director approves alternate requirements under Subsection R315-264-552(e)(3)(ii), CAMUs that consist of new, replacement, or laterally expanded units shall include a composite liner and a leachate collection system that is designed and constructed to maintain less than a 30-cm depth of leachate over the liner. For purposes of Section R315-264-552, composite liner means a system consisting of two components;

the upper component shall consist of a minimum 30-mil flexible membrane liner (FML), and the lower component shall consist of at least a two-foot layer of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} cm/sec. FML components consisting of high density polyethylene (HDPE) shall be at least 60 mil thick. The FML component shall be installed in direct and uniform contact with the compacted soil component;

(ii) Alternate requirements. The Director may approve alternate requirements if:

(A) The Director finds that alternate design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents into the ground water or surface water at least as effectively as the liner and leachate collection systems in Subsection R315-264-552(e)(3)(i); or

(B) The CAMU is to be established in an area with existing significant levels of contamination, and the Director finds that an alternative design, including a design that does not include a liner, would prevent migration from the unit that would exceed long-term remedial goals.

(4) Minimum treatment requirements: Unless the wastes will be placed in a CAMU for storage and/or treatment only in accordance with Subsection R315-264-552(f), CAMU-eligible wastes that, absent Section R315-264-552, would be subject to the treatment requirements of Rule R315-268, and that the Director determines contain principal hazardous constituents shall be treated to the standards specified in Subsection R315-264-552(e)(4)(iii).

(i) Principal hazardous constituents are those constituents that the Director determines pose a risk to human health and the environment substantially higher than the cleanup levels or goals at the site.

(A) In general, the Director shall designate as principal hazardous constituents:

(I) Carcinogens that pose a potential direct risk from ingestion or inhalation at the site at or above 10^{-3} ; and

(II) Non-carcinogens that pose a potential direct risk from ingestion or inhalation at the site an order of magnitude or greater over their reference dose.

(B) The Director shall also designate constituents as principal hazardous constituents, where appropriate, when risks to human health and the environment posed by the potential migration of constituents in wastes to ground water are substantially higher than cleanup levels or goals at the site; when making such a designation, the Director may consider such factors as constituent concentrations, and fate and transport characteristics under site conditions.

(C) The Director may also designate other constituents as principal hazardous constituents that the Director determines pose a risk to human health and the environment substantially higher than the cleanup levels or goals at the site.

(ii) In determining which constituents are "principal hazardous constituents," the Director shall consider all constituents which, absent Section R315-264-552, would be subject to the treatment requirements in Rule R315-268.

(iii) Waste that the Director determines contains principal hazardous constituents shall meet treatment standards determined in accordance with Subsections R315-264-552(e)(4)(iv) or (e)(4)(v).

(iv) Treatment standards for wastes placed in CAMUs.

(A) For non-metals, treatment shall achieve 90 percent reduction in total principal hazardous constituent concentrations, except as provided by Subsection R315-264-552(e)(4)(iv)(C).

(B) For metals, treatment shall achieve 90 percent reduction in principal hazardous constituent concentrations as measured in leachate from the treated waste or media, tested according to the TCLP, or 90 percent reduction in total constituent concentrations, when a metal removal treatment

technology is used, except as provided by Subsection R315-264-552(e)(4)(iv)(C).

(C) When treatment of any principal hazardous constituent to a 90 percent reduction standard would result in a concentration less than 10 times the Universal Treatment Standard for that constituent, treatment to achieve constituent concentrations less than 10 times the Universal Treatment Standard is not required. Universal Treatment Standards are identified in Section R315-268-48 Table UTS.

(D) For waste exhibiting the hazardous characteristic of ignitability, corrosivity or reactivity, the waste shall also be treated to eliminate these characteristics.

(E) For debris, the debris shall be treated in accordance with Section R315-268-45, or by methods or to levels established under Subsections R315-264-552(e)(4)(iv)(A) through (D) or Subsection R315-264-552(e)(4)(v), whichever the Director determines is appropriate.

(F) Alternatives to TCLP. For metal bearing wastes for which metals removal treatment is not used, the Director may specify a leaching test other than the TCLP, SW846 Method 1311, Rule R315-260-11(c)(3)(v), to measure treatment effectiveness, provided the Director determines that an alternative leach testing protocol is appropriate for use, and that the alternative more accurately reflects conditions at the site that affect leaching.

(v) Adjusted standards. The Director may adjust the treatment level or method in Subsection R315-264-552(e)(4)(iv) to a higher or lower level, based on one or more of the following factors, as appropriate. The adjusted level or method shall be protective of human health and the environment:

(A) The technical impracticability of treatment to the levels or by the methods in Subsection R315-264-552(e)(4)(iv);

(B) The levels or methods in Subsection R315-264-552(e)(4)(iv) would result in concentrations of principal hazardous constituents (PHCs) that are significantly above or below cleanup standards applicable to the site, established either site-specifically, or promulgated under state or federal law;

(C) The views of the affected local community on the treatment levels or methods in Subsection R315-264-552(e)(4)(iv) as applied at the site, and, for treatment levels, the treatment methods necessary to achieve these levels;

(D) The short-term risks presented by the on-site treatment method necessary to achieve the levels or treatment methods in Subsection R315-264-552(e)(4)(iv);

(E) The long-term protection offered by the engineering design of the CAMU and related engineering controls:

(I) Where the treatment standards in Subsection R315-264-552(e)(4)(iv) are substantially met and the principal hazardous constituents in the waste or residuals are of very low mobility; or

(II) Where cost-effective treatment has been used and the CAMU meets the Subtitle C liner and leachate collection requirements for new land disposal units at Subsections R315-264-301(c) and (d); or

(III) Where, after review of appropriate treatment technologies, the Director determines that cost-effective treatment is not reasonably available, and the CAMU meets the Subtitle C liner and leachate collection requirements for new land disposal units at Subsection R315-264-301(c) and (d); or

(IV) Where cost-effective treatment has been used and the principal hazardous constituents in the treated wastes are of very low mobility; or

(V) Where, after review of appropriate treatment technologies, the Director determines that cost-effective treatment is not reasonably available, the principal hazardous constituents in the wastes are of very low mobility, and either the CAMU meets or exceeds the liner standards for new, replacement, or laterally expanded CAMUs in Subsections R315-264-552(e)(3)(i) and (ii), or the CAMU provides

substantially equivalent or greater protection.

(vi) The treatment required by the treatment standards shall be completed prior to, or within a reasonable time after, placement in the CAMU.

(vii) For the purpose of determining whether wastes placed in CAMUs have met site-specific treatment standards, the Director may, as appropriate, specify a subset of the principal hazardous constituents in the waste as analytical surrogates for determining whether treatment standards have been met for other principal hazardous constituents. This specification shall be based on the degree of difficulty of treatment and analysis of constituents with similar treatment properties.

(5) Except as provided in Subsection R315-264-552(f), requirements for ground water monitoring and corrective action that are sufficient to:

(i) Continue to detect and to characterize the nature, extent, concentration, direction, and movement of existing releases of hazardous constituents in ground water from sources located within the CAMU; and

(ii) Detect and subsequently characterize releases of hazardous constituents to ground water that may occur from areas of the CAMU in which wastes will remain in place after closure of the CAMU; and

(iii) Require notification to the Director and corrective action as necessary to protect human health and the environment for releases to ground water from the CAMU.

(6) Except as provided in Subsection R315-264-552(f), closure and post-closure requirements:

(i) Closure of corrective action management units shall:

(A) Minimize the need for further maintenance; and

(B) Control, minimize, or eliminate, to the extent necessary to protect human health and the environment, for areas where wastes remain in place, post-closure escape of hazardous wastes, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground, to surface waters, or to the atmosphere.

(ii) Requirements for closure of CAMUs shall include the following, as appropriate and as deemed necessary by the Director for a given CAMU:

(A) Requirements for excavation, removal, treatment or containment of wastes; and

(B) Requirements for removal and decontamination of equipment, devices, and structures used in CAMU-eligible waste management activities within the CAMU.

(iii) In establishing specific closure requirements for CAMUs under Subsection R315-264-552(e), the Director shall consider the following factors:

(A) CAMU characteristics;

(B) Volume of wastes which remain in place after closure;

(C) Potential for releases from the CAMU;

(D) Physical and chemical characteristics of the waste;

(E) Hydrogeological and other relevant environmental conditions at the facility which may influence the migration of any potential or actual releases; and

(F) Potential for exposure of humans and environmental receptors if releases were to occur from the CAMU.

(iv) Cap requirements:

(A) At final closure of the CAMU, for areas in which wastes will remain after closure of the CAMU, with constituent concentrations at or above remedial levels or goals applicable to the site, the owner or operator shall cover the CAMU with a final cover designed and constructed to meet the following performance criteria, except as provided in Subsection R315-264-552(e)(6)(iv)(B):

(1) Provide long-term minimization of migration of liquids through the closed unit;

(2) Function with minimum maintenance;

(3) Promote drainage and minimize erosion or abrasion of the cover;

(4) Accommodate settling and subsidence so that the cover's integrity is maintained; and

(5) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

(B) The Director may determine that modifications to Subsection R315-264-552(e)(6)(iv)(A) are needed to facilitate treatment or the performance of the CAMU, e.g., to promote biodegradation.

(v) Post-closure requirements as necessary to protect human health and the environment, to include, for areas where wastes will remain in place, monitoring and maintenance activities, and the frequency with which such activities shall be performed to ensure the integrity of any cap, final cover, or other containment system.

(f) CAMUs used for storage and/or treatment only are CAMUs in which wastes will not remain after closure. Such CAMUs shall be designated in accordance with all of the requirements of Section R315-264-552, except as follows.

(1) CAMUs that are used for storage and/or treatment only and that operate in accordance with the time limits established in the staging pile regulations at Subsections R315-264-554(d)(1)(iii), (h), and (i) are subject to the requirements for staging piles at Subsections R315-264-554(d)(1)(i) and (ii), (d)(2), (e) and (f), (j), and (k) in lieu of the performance standards and requirements for CAMUs in Subsections R315-264-552(c) and (e)(3) through (6).

(2) CAMUs that are used for storage and/or treatment only and that do not operate in accordance with the time limits established in the staging pile regulations at Subsections R315-264-554(d)(1)(iii), (h), and (i):

(i) Shall operate in accordance with a time limit, established by the Director, that is no longer than necessary to achieve a timely remedy selected for the waste, and

(ii) Are subject to the requirements for staging piles at Subsection R315-264-554(d)(1)(i) and (ii), (d)(2), (e) and (f), (j), and (k) in lieu of the performance standards and requirements for CAMUs in Subsection R315-264-552(c) and (e)(4) and (6).

(g) CAMUs into which wastes are placed where all wastes have constituent levels at or below remedial levels or goals applicable to the site do not have to comply with the requirements for liners at Subsection R315-264-552(e)(3)(i), caps at Subsection R315-264-552(e)(6)(iv), ground water monitoring requirements at Subsection R315-264-552(e)(5) or, for treatment and/or storage-only CAMUs, the design standards at Subsection R315-264-552(f).

(h) The Director shall provide public notice and a reasonable opportunity for public comment before designating a CAMU. Such notice shall include the rationale for any proposed adjustments under Subsection R315-264-552(e)(4)(v) to the treatment standards in Subsection R315-264-552(e)(4)(iv).

(i) Notwithstanding any other provision of Section R315-264-552, the Director may impose additional requirements as necessary to protect human health and the environment.

(j) Incorporation of a CAMU into an existing permit shall be approved by the Director according to the procedures for permit modifications under Section R315-270-41, or according to the permit modification procedures of Section R315-270-42.

(k) The designation of a CAMU does not change the Director's existing authority to address clean-up levels, media-specific points of compliance to be applied to remediation at a facility, or other remedy selection decisions.

R315-264-553. Temporary Units (TU).

(a) For temporary tanks and container storage areas used to treat or store hazardous remediation wastes during remedial activities required under Section R315-264-101 or RCRA

3008(h), or at a permitted facility that is not subject to Section R315-264-101, the Director may designate a unit at the facility, as a temporary unit. A temporary unit shall be located within the contiguous property under the control of the owner/operator where the wastes to be managed in the temporary unit originated. For temporary units, the Director may replace the design, operating, or closure standard applicable to these units under Rule R315-264 or 265 with alternative requirements which protect human health and the environment.

(b) Any temporary unit to which alternative requirements are applied in accordance with Subsection R315-264-553(a) shall be:

- (1) Located within the facility boundary; and
- (2) Used only for treatment or storage of remediation wastes.

(c) In establishing standards to be applied to a temporary unit, the Director shall consider the following factors:

- (1) Length of time such unit will be in operation;
- (2) Type of unit;
- (3) Volumes of wastes to be managed;
- (4) Physical and chemical characteristics of the wastes to be managed in the unit;
- (5) Potential for releases from the unit;
- (6) Hydrogeological and other relevant environmental conditions at the facility which may influence the migration of any potential releases; and
- (7) Potential for exposure of humans and environmental receptors if releases were to occur from the unit.

(d) The Director shall specify in the permit or order the length of time a temporary unit will be allowed to operate, to be no longer than a period of one year. The Director shall also specify the design, operating, and closure requirements for the unit.

(e) The Director may extend the operational period of a temporary unit once for no longer than a period of one year beyond that originally specified in the permit or order, if the Director determines that:

- (1) Continued operation of the unit will not pose a threat to human health and the environment; and
- (2) Continued operation of the unit is necessary to ensure timely and efficient implementation of remedial actions at the facility.

(f) Incorporation of a temporary unit or a time extension for a temporary unit into an existing permit shall be:

- (1) Approved in accordance with the procedures for permit modifications under Section R315-270-41; or
- (2) Requested by the owner/operator as a Class II modification according to the procedures under Section R315-270-42.

(g) The Director shall document the rationale for designating a temporary unit and for granting time extensions for temporary units and shall make such documentation available to the public.

R315-264-554. Staging Piles.

Section R315-264-554 is written in a special format to make it easier to understand the regulatory requirements. Like other regulations, this establishes enforceable legal requirements. For Section R315-264-554 "I" and "you" refer to the owner/operator.

(a) What is a staging pile? A staging pile is an accumulation of solid, non-flowing remediation waste, as defined in Section R315-260-10, that is not a containment building and is used only during remedial operations for temporary storage at a facility. A staging pile shall be located within the contiguous property under the control of the owner/operator where the wastes to be managed in the staging pile originated. Staging piles shall be designated by the Director according to the requirements in Section R315-264-554.

(1) For the purposes of Section R315-264-554, storage includes mixing, sizing, blending, or other similar physical operations as long as they are intended to prepare the wastes for subsequent management or treatment.

(b) When may I use a staging pile? You may use a staging pile to store hazardous remediation waste, or remediation waste otherwise subject to land disposal restrictions, only if you follow the standards and design criteria the Director has designated for that staging pile. The Director shall designate the staging pile in a permit or, at an interim status facility, in a closure plan or order, consistent with Subsections R315-270-72(a)(5) and (b)(5). The Director shall establish conditions in the permit, closure plan, or order that comply with Subsection R315-264-554(d) through (k).

(c) What information shall I provide to get a staging pile designated? When seeking a staging pile designation, you shall provide:

- (1) Sufficient and accurate information to enable the Director to impose standards and design criteria for your staging pile according to Section R315-264-554(d) through (k);
- (2) Certification by a qualified Professional Engineer for technical data, such as design drawings and specifications, and engineering studies, unless the Director determines, based on information that you provide, that this certification is not necessary to ensure that a staging pile will protect human health and the environment; and
- (3) Any additional information the Director determines is necessary to protect human health and the environment.

(d) What performance criteria shall a staging pile satisfy? The Director shall establish the standards and design criteria for the staging pile in the permit, closure plan, or order.

(1) The standards and design criteria shall comply with the following:

(i) The staging pile shall facilitate a reliable, effective and protective remedy;

(ii) The staging pile shall be designed so as to prevent or minimize releases of hazardous wastes and hazardous constituents into the environment, and minimize or adequately control cross-media transfer, as necessary to protect human health and the environment, for example, through the use of liners, covers, run-off/run-on controls, as appropriate; and

(iii) The staging pile shall not operate for more than two years, except when the Director grants an operating term extension under Subsection R315-264-554(i), entitled "May I receive an operating extension for a staging pile?". You shall measure the two-year limit, or other operating term specified by the Director in the permit, closure plan, or order, from the first time you place remediation waste into a staging pile. You shall maintain a record of the date when you first placed remediation waste into the staging pile for the life of the permit, closure plan, or order, or for three years, whichever is longer.

(2) In setting the standards and design criteria, the Director shall consider the following factors:

- (i) Length of time the pile will be in operation;
- (ii) Volumes of wastes you intend to store in the pile;
- (iii) Physical and chemical characteristics of the wastes to be stored in the unit;
- (iv) Potential for releases from the unit;
- (v) Hydrogeological and other relevant environmental conditions at the facility that may influence the migration of any potential releases; and
- (vi) Potential for human and environmental exposure to potential releases from the unit;

(e) May a staging pile receive ignitable or reactive remediation waste? You shall not place ignitable or reactive remediation waste in a staging pile unless:

(1) You have treated, rendered or mixed the remediation waste before you placed it in the staging pile so that:

- (i) The remediation waste no longer meets the definition

of ignitable or reactive under Sections R315-261-21 or 23; and
 (ii) You have complied with Subsection R315-264-17(b);
 or

(2) You manage the remediation waste to protect it from exposure to any material or condition that may cause it to ignite or react.

(f) How do I handle incompatible remediation wastes in a staging pile? The term "incompatible waste" is defined in Section R315-260-10. You shall comply with the following requirements for incompatible wastes in staging piles:

(1) You shall not place incompatible remediation wastes in the same staging pile unless you have complied with Subsection R315-264-17(b);

(2) If remediation waste in a staging pile is incompatible with any waste or material stored nearby in containers, other piles, open tanks or land disposal units, for example, surface impoundments, you shall separate the incompatible materials, or protect them from one another by using a dike, berm, wall or other device; and

(3) You shall not pile remediation waste on the same base where incompatible wastes or materials were previously piled, unless the base has been decontaminated sufficiently to comply with Subsection R315-264-17(b).

(g) Are staging piles subject to Land Disposal Restrictions and Minimum Technological Requirements? No. Placing hazardous remediation wastes into a staging pile does not constitute land disposal of hazardous wastes or create a unit that is subject to the minimum technological requirements of RCRA 3004(o).

(h) How long may I operate a staging pile? The Director may allow a staging pile to operate for up to two years after hazardous remediation waste is first placed into the pile. You shall use a staging pile no longer than the length of time designated by the Director in the permit, closure plan, or order, the "operating term", except as provided in Subsection R315-264-554(i).

(i) May I receive an operating extension for a staging pile?

(1) The Director may grant one operating term extension of up to 180 days beyond the operating term limit contained in the permit, closure plan, or order, see Subsection R315-264-554(l) for modification procedures. To justify to the Director the need for an extension, you shall provide sufficient and accurate information to enable the Director to determine that continued operation of the staging pile:

(i) Will not pose a threat to human health and the environment; and

(ii) Is necessary to ensure timely and efficient implementation of remedial actions at the facility.

(2) The Director may, as a condition of the extension, specify further standards and design criteria in the permit, closure plan, or order, as necessary, to ensure protection of human health and the environment.

(j) What is the closure requirement for a staging pile located in a previously contaminated area?

(1) Within 180 days after the operating term of the staging pile expires, you shall close a staging pile located in a previously contaminated area of the site by removing or decontaminating all:

(i) Remediation waste;

(ii) Contaminated containment system components; and

(iii) Structures and equipment contaminated with waste and leachate.

(2) You shall also decontaminate contaminated subsoils in a manner and according to a schedule that the Director determines will protect human health and the environment.

(3) The Director shall include the above requirements in the permit, closure plan, or order in which the staging pile is designated.

(k) What is the closure requirement for a staging pile

located in an uncontaminated area?

(1) Within 180 days after the operating term of the staging pile expires, you shall close a staging pile located in an uncontaminated area of the site according to Subsections R315-264-258(a) and 264-111; or according to 40 CFR 265.258(a) and 265.111, which are adopted by reference.

(2) The Director shall include the above requirement in the permit, closure plan, or order in which the staging pile is designated.

(l) How may my existing permit, for example, Remedial Action Plan, closure plan, or order be modified to allow me to use a staging pile?

(1) To modify a permit, other than a Remedial Action Plan, to incorporate a staging pile or staging pile operating term extension, either:

(i) The Director shall approve the modification under the procedures for permit modifications in Section R315-270-41; or

(ii) You shall request a Class 2 modification under Section R315-270-42.

(2) To modify a Remedial Action Plan to incorporate a staging pile or staging pile operating term extension, you shall comply with the Remedial Action Plan modification requirements under Sections R315-270-170 and 175.

(3) To modify a closure plan to incorporate a staging pile or staging pile operating term extension, you shall follow the applicable requirements under Section R315-264-112(c) or 40 CFR 265.112(c), which is adopted by reference.

(4) To modify an order to incorporate a staging pile or staging pile operating term extension, you shall follow the terms of the order and the applicable provisions of Subsection R315-270-72(a)(5) or (b)(5).

(m) Is information about the staging pile available to the public? The Director shall document the rationale for designating a staging pile or staging pile operating term extension and make this documentation available to the public.

R315-264-555. Disposal of CAMU-Eligible Wastes in Permitted Hazardous Waste Landfills.

(a) The Director may approve placement of CAMU-eligible wastes in hazardous waste landfills not located at the site from which the waste originated, without the wastes meeting the requirements of Rule R315-268, if the conditions in Subsections R315-264-555(a)(1) through (3) are met:

(1) The waste meets the definition of CAMU-eligible waste in Subsection R315-264-552(a)(1) and (2).

(2) The Director identifies principal hazardous constituents in such waste, in accordance with Subsection R315-264-552(e)(4)(i) and (ii), and requires that such principal hazardous constituents are treated to any of the following standards specified for CAMU-eligible wastes:

(i) The treatment standards under Subsection R315-264-552(e)(4)(iv); or

(ii) Treatment standards adjusted in accordance with Subsection R315-264-552(e)(4)(v)(A), (C), (D) or (E)(I); or

(iii) Treatment standards adjusted in accordance with Subsection R315-264-552(e)(4)(v)(E)(II), where treatment has been used and that treatment significantly reduces the toxicity or mobility of the principal hazardous constituents in the waste, minimizing the short-term and long-term threat posed by the waste, including the threat at the remediation site.

(3) The landfill receiving the CAMU-eligible waste shall have a permit issued under Section 19-6-108, meet the requirements for new landfills in Sections R315-264-300 through 317, and be authorized to accept CAMU-eligible wastes; for the purposes of this requirement, "permit" does not include interim status.

(b) The person seeking approval shall provide sufficient information to enable the Director to approve placement of CAMU-eligible waste in accordance with Subsection R315-264-

555(a). Information required by Subsections R315-264-552(d)(1) through (3) for CAMU applications shall be provided, unless not reasonably available.

(c) The Director shall provide public notice and a reasonable opportunity for public comment before approving CAMU eligible waste for placement in an off-site permitted hazardous waste landfill, consistent with the requirements for CAMU approval at Subsection R315-264-552(h). The approval shall be specific to a single remediation.

(d) Applicable hazardous waste management requirements in Rule R315-264, including recordkeeping requirements to demonstrate compliance with treatment standards approved under Section R315-264-555, for CAMU-eligible waste shall be incorporated into the receiving facility permit through permit issuance or a permit modification, providing notice and an opportunity for comment and a hearing. Notwithstanding Subsection R315-270-4(a), a landfill may not receive hazardous CAMU-eligible waste under Section R315-264-555 unless its permit specifically authorizes receipt of such waste.

(e) For each remediation, CAMU-eligible waste may not be placed in an off-site landfill authorized to receive CAMU-eligible waste in accordance with Subsection R315-264-555(d) until the following additional conditions have been met:

(1) The landfill owner/operator notifies the Director and persons on the facility mailing list, maintained in accordance with Subsection R315-124-10(c)(1)(ix), of his or her intent to receive CAMU-eligible waste in accordance with Section R315-264-555; the notice shall identify the source of the remediation waste, the principal hazardous constituents in the waste, and treatment requirements.

(2) Persons on the facility mailing list may provide comments, including objections to the receipt of the CAMU-eligible waste, to the Director within 15 days of notification.

(3) The Director may object to the placement of the CAMU-eligible waste in the landfill within 30 days of notification; the Director may extend the review period an additional 30 days because of public concerns or insufficient information.

(4) CAMU-eligible wastes may not be placed in the landfill until the Director has notified the facility owner/operator that he or she does not object to its placement.

(5) If the Director objects to the placement or does not notify the facility owner/operator that he or she has chosen not to object, the facility may not receive the waste, notwithstanding Subsection R315-270-4(a), until the objection has been resolved, or the owner/operator obtains a permit modification in accordance with the procedures of Section R315-270-42 specifically authorizing receipt of the waste.

(6) As part of the permit issuance or permit modification process of Subsection R315-264-555(d), the Director may modify, reduce, or eliminate the notification requirements of Subsection R315-264-555(e) as they apply to specific categories of CAMU-eligible waste, based on minimal risk.

(f) Generators of CAMU-eligible wastes sent off-site to a hazardous waste landfill under Section R315-264-555 shall comply with the requirements of Subsection R315-268-7(a)(4); off-site facilities treating CAMU-eligible wastes to comply with Section R315-264-555 shall comply with the requirements of Subsection R315-268-7(b)(4), except that the certification shall be with respect to the treatment requirements of Subsection R315-264-555(a)(2).

(g) For the purposes of Section R315-264-555 only, the "design of the CAMU" in Subsection R315-264-552(e)(4)(v)(E) means design of the permitted hazardous waste landfill.

R315-264-570. Drip Pads -- Applicability.

(a) The requirements of Sections R315-264-570 through 575 apply to owners and operators of facilities that use new or existing drip pads to convey treated wood drippage,

precipitation, and/or surface water run-off to an associated collection system. Existing drip pads are those constructed before December 6, 1990 and those for which the owner or operator has a design and has entered into binding financial or other agreements for construction prior to December 6, 1990 for all HSWA drip pads or July 30, 1993 for all non-HSWA drip pads. All other drip pads are new drip pads. The requirement at Subsection R315-264-573(b)(3) to install a leak collection system applies only to those drip pads that are constructed after December 24, 1992 except for those constructed after December 24, 1992 for which the owner or operator has a design and has entered into binding financial or other agreements for construction prior to December 24, 1992 for all HSWA drip pads or July 30, 1993 for all non-HSWA drip pads.

(b) The owner or operator of any drip pad that is inside or under a structure that provides protection from precipitation so that neither run-off nor run-on is generated is not subject to regulation under Subsection R315-264-573(e) or Subsection R315-264-573(f), as appropriate.

(c) The requirements of Sections R315-264-570 through 575 are not applicable to the management of infrequent and incidental drippage in storage yards provided that:

(1) The owner or operator maintains and complies with a written contingency plan that describes how the owner or operator will respond immediately to the discharge of such infrequent and incidental drippage. At a minimum, the contingency plan shall describe how the owner or operator will do the following:

- (i) Clean up the drippage;
- (ii) Document the cleanup of the drippage;
- (iii) Retain documents regarding cleanup for three years;

and

(iv) Manage the contaminated media in a manner consistent with Utah regulations.

R315-264-571. Assessment of Existing Drip Pad Integrity.

(a) For each existing drip pad as defined in Subsection R315-264-570, the owner or operator shall evaluate the drip pad and determine whether it meets all of the requirements of Sections R315-264-570 through 575, except the requirements for liners and leak detection systems of Subsection R315-264-573(b). The owner or operator shall obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by a qualified Professional Engineer that attests to the results of the evaluation. The assessment shall be reviewed, updated and re-certified annually until all upgrades, repairs, or modifications necessary to achieve compliance with all the standards of Section R315-264-573 are complete. The evaluation shall document the extent to which the drip pad meets each of the design and operating standards of Section R315-264-573, except the standards for liners and leak detection systems, specified in Subsection R315-264-573(b).

(b) The owner or operator shall develop a written plan for upgrading, repairing, and modifying the drip pad to meet the requirements of Subsection R315-264-573(b) and submit the plan to the Director no later than 2 years before the date that all repairs, upgrades, and modifications are complete. This written plan shall describe all changes to be made to the drip pad in sufficient detail to document compliance with all the requirements of Section R315-264-573. The plan shall be reviewed and certified by a qualified Professional Engineer.

(c) Upon completion of all upgrades, repairs, and modifications, the owner or operator shall submit to the Director, the as-built drawings for the drip pad together with a certification by a qualified Professional Engineer attesting that the drip pad conforms to the drawings.

(d) If the drip pad is found to be leaking or unfit for use, the owner or operator shall comply with the provisions of Subsection R315-264-573(m) or close the drip pad in

accordance with Section R315-264-575.

R315-264-572. Design and Installation of New Drip Pads.

Owners and operators of new drip pads shall ensure that the pads are designed, installed, and operated in accordance with one of the following:

- (a) all of the requirements of Section R315-264-573, except 573(a)(4) and Subsections R315-264-574 and 575, or
- (b) all of the requirements of Sections R315-264-573, except 573(b), 574 and 575.

R315-264-573. Design and Operating Requirements.

(a) Drip pads shall:

(1) Be constructed of non-earthen materials, excluding wood and non-structurally supported asphalt;

(2) Be sloped to free-drain treated wood drippage, rain and other waters, or solutions of drippage and water or other wastes to the associated collection system;

(3) Have a curb or berm around the perimeter;

(4)(i) Have a hydraulic conductivity of less than or equal to 1×10^{-7} centimeters per second, e.g., existing concrete drip pads shall be sealed, coated, or covered with a surface material with a hydraulic conductivity of less than or equal to 1×10^{-7} centimeters per second such that the entire surface where drippage occurs or may run across is capable of containing such drippage and mixtures of drippage and precipitation, materials, or other wastes while being routed to an associated collection system. This surface material shall be maintained free of cracks and gaps that could adversely affect its hydraulic conductivity, and the material shall be chemically compatible with the preservatives that contact the drip pad. The requirements of this provision apply only to existing drip pads and those drip pads for which the owner or operator elects to comply with Subsection R315-264-572(b) instead of Subsection R315-264-572(a).

(ii) The owner or operator shall obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by a qualified Professional Engineer that attests to the results of the evaluation. The assessment shall be reviewed, updated and recertified annually. The evaluation shall document the extent to which the drip pad meets the design and operating standards of Section R315-264-573, except for Subsection R315-264-573(b).

(5) Be of sufficient structural strength and thickness to prevent failure due to physical contact, climatic conditions, the stress of daily operations, e.g., variable and moving loads such as vehicle traffic, movement of wood, etc.

Note: The Director will generally consider applicable standards established by professional organizations generally recognized by the industry such as the American Concrete Institute or the American Society of Testing and Materials in judging the structural integrity requirement of Subsection R315-264-573(a).

(b) If an owner/operator elects to comply with Subsection R315-264-572(a) instead of Subsection R315-264-572(b), the drip pad shall have:

(1) A synthetic liner installed below the drip pad that is designed, constructed, and installed to prevent leakage from the drip pad into the adjacent subsurface soil or groundwater or surface water at any time during the active life, including the closure period, of the drip pad. The liner shall be constructed of materials that will prevent waste from being absorbed into the liner and to prevent releases into the adjacent subsurface soil or groundwater or surface water during the active life of the facility. The liner shall be:

(i) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients, including static head and external hydrogeologic forces; physical contact with the waste

or drip pad leakage to which they are exposed; climatic conditions; the stress of installation; and the stress of daily operation, including stresses from vehicular traffic on the drip pad;

(ii) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression or uplift; and

(iii) Installed to cover all surrounding earth that could come in contact with the waste or leakage; and

(2) A leakage detection system immediately above the liner that is designed, constructed, maintained and operated to detect leakage from the drip pad. The leakage detection system shall be:

(i) Constructed of materials that are:

(A) Chemically resistant to the waste managed in the drip pad and the leakage that might be generated; and

(B) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlaying materials and by any equipment used at the drip pad;

(ii) Designed and operated to function without clogging through the scheduled closure of the drip pad; and

(iii) Designed so that it will detect the failure of the drip pad or the presence of a release of hazardous waste or accumulated liquid at the earliest practicable time.

(3) A leakage collection system immediately above the liner that is designed, constructed, maintained and operated to collect leakage from the drip pad such that it can be removed from below the drip pad. The date, time, and quantity of any leakage collected in this system and removed shall be documented in the operating log.

(c) Drip pads shall be maintained such that they remain free of cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the drip pad.

Note: See Subsection R315-264-573(m) for remedial action required if deterioration or leakage is detected.

(d) The drip pad and associated collection system shall be designed and operated to convey, drain, and collect liquid resulting from drippage or precipitation in order to prevent run-off.

(e) Unless protected by a structure, as described in Subsection R315-264-570(b), the owner or operator shall design, construct, operate and maintain a run-on control system capable of preventing flow onto the drip pad during peak discharge from at least a 24-hour, 25-year storm, unless the system has sufficient excess capacity to contain any run-off that might enter the system.

(f) Unless protected by a structure or cover as described in Subsection R315-264-570(b), the owner or operator shall design, construct, operate and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(g) The drip pad shall be evaluated to determine that it meets the requirements of Subsections R315-264-573(a) through (f) and the owner or operator shall obtain a statement from a qualified Professional Engineer certifying that the drip pad design meets the requirements of Section R315-264-573.

(h) Drippage and accumulated precipitation shall be removed from the associated collection system as necessary to prevent overflow onto the drip pad.

(i) The drip pad surface shall be cleaned thoroughly in a manner and frequency such that accumulated residues of hazardous waste or other materials are removed, with residues being properly managed as hazardous waste, so as to allow weekly inspections of the entire drip pad surface without interference or hindrance from accumulated residues of hazardous waste or other materials on the drip pad. The owner or operator shall document the date and time of each cleaning and the cleaning procedure used in the facility's operating log.

The owner/operator shall determine if the residues are hazardous as per Section R315-262-11 and, if so, shall manage them under Rules R315-261 through 268, 270, and section 3010 of RCRA.

(j) Drip pads shall be operated and maintained in a manner to minimize tracking of hazardous waste or hazardous waste constituents off the drip pad as a result of activities by personnel or equipment.

(k) After being removed from the treatment vessel, treated wood from pressure and non-pressure processes shall be held on the drip pad until drippage has ceased. The owner or operator shall maintain records sufficient to document that all treated wood is held on the pad following treatment in accordance with this requirement.

(l) Collection and holding units associated with run-on and run-off control systems shall be emptied or otherwise managed as soon as possible after storms to maintain design capacity of the system.

(m) Throughout the active life of the drip pad and as specified in the permit, if the owner or operator detects a condition that may have caused or has caused a release of hazardous waste, the condition shall be repaired within a reasonably prompt period of time following discovery, in accordance with the following procedures:

(1) Upon detection of a condition that may have caused or has caused a release of hazardous waste, e.g., upon detection of leakage in the leak detection system, the owner or operator shall:

(i) Enter a record of the discovery in the facility operating log;

(ii) Immediately remove the portion of the drip pad affected by the condition from service;

(iii) Determine what steps shall be taken to repair the drip pad and clean up any leakage from below the drip pad, and establish a schedule for accomplishing the repairs;

(iv) Within 24 hours after discovery of the condition, notify the Director of the condition and, within 10 working days, provide written notice to the Director with a description of the steps that will be taken to repair the drip pad and clean up any leakage, and the schedule for accomplishing this work.

(2) The Director shall review the information submitted, make a determination regarding whether the pad shall be removed from service completely or partially until repairs and cleanup are complete and notify the owner or operator of the determination and the underlying rationale in writing.

(3) Upon completing all repairs and cleanup, the owner or operator shall notify the Director in writing and provide a certification signed by an independent, qualified registered professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with Subsection R315-264-573(m)(1)(iv).

(n) Should a permit be necessary, the Director shall specify in the permit all design and operating practices that are necessary to ensure that the requirements of Section R315-264-573 are satisfied.

(o) The owner or operator shall maintain, as part of the facility operating log, documentation of past operating and waste handling practices. This shall include identification of preservative formulations used in the past, a description of drippage management practices, and a description of treated wood storage and handling practices.

R315-264-574. Inspections.

(a) During construction or installation, liners and cover systems, e.g., membranes, sheets, or coatings, shall be inspected for uniformity, damage and imperfections, e.g., holes, cracks, thin spots, or foreign materials. Immediately after construction or installation, liners shall be inspected and certified as meeting the requirements in Section R315-264-573 by a qualified Professional Engineer. This certification shall be maintained at the facility as part of the facility operating record. After

installation, liners and covers shall be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters.

(b) While a drip pad is in operation, it shall be inspected weekly and after storms to detect evidence of any of the following:

(1) Deterioration, malfunctions or improper operation of run-on and run-off control systems;

(2) The presence of leakage in and proper functioning of leak detection system.

(3) Deterioration or cracking of the drip pad surface.

Note: See Section R315-264-573(m) for remedial action required if deterioration or leakage is detected.

R315-264-575. Closure.

(a) At closure, the owner or operator shall remove or decontaminate all waste residues, contaminated containment system components, pad, liners, etc., contaminated subsoils, and structures and equipment contaminated with waste and leakage, and manage them as hazardous waste.

(b) If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in Subsection R315-264-575(a), the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he shall close the facility and perform post-closure care in accordance with closure and post-closure care requirements that apply to landfills, Section R315-264-310. For permitted units, the requirement to have a permit continues throughout the post-closure period. In addition, for the purpose of closure, post-closure, and financial responsibility, such a drip pad is then considered to be landfill, and the owner or operator shall meet all of the requirements for landfills specified in Sections R315-264-110 through 120 and 140 through 151.

(c)(1) The owner or operator of an existing drip pad, as defined in Section R315-264-570, that does not comply with the liner requirements of Subsection R315-264-573(b)(1) shall:

(i) Include in the closure plan for the drip pad under Section R315-264-112 both a plan for complying with Subsection R315-264-575(a) and a contingent plan for complying with Subsection R315-264-575(b) in case not all contaminated subsoils can be practicably removed at closure; and

(ii) Prepare a contingent post-closure plan under Section R315-264-118 for complying with Subsection R315-264-575(b) in case not all contaminated subsoils can be practicably removed at closure.

(2) The cost estimates calculated under Sections R315-264-112 and 144 for closure and post-closure care of a drip pad subject to Subsection R315-264-575(c) shall include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under Subsection R315-264-575(a).

R315-264-600. Miscellaneous Units -- Applicability.

The requirements in Sections R315-264-600 through 603 apply to owners and operators of facilities that treat, store, or dispose of hazardous waste in miscellaneous units, except as Section R315-264-1 provides otherwise.

R315-264-601. Environmental Performance Standards.

A miscellaneous unit shall be located, designed, constructed, operated, maintained, and closed in a manner that will ensure protection of human health and the environment. Permits for miscellaneous units are to contain such terms and provisions as necessary to protect human health and the environment, including, but not limited to, as appropriate, design and operating requirements, detection and monitoring requirements, and requirements for responses to releases of

hazardous waste or hazardous constituents from the unit. Permit terms and provisions shall include those requirements of Sections R315-264-170 through 179, 190 through 200, 220 through 232, 250 through 259, 270 through 283, 300 through 317, 340 through 351, 1030 through 1036, 1050 through 1065, 1080 through 1090, Rule 270, Subsection R307-214-2(39), and Rule R317-7 that are appropriate for the miscellaneous unit being permitted. Protection of human health and the environment includes, but is not limited to:

(a) Prevention of any releases that may have adverse effects on human health or the environment due to migration of waste constituents in the ground water or subsurface environment, considering:

(1) The volume and physical and chemical characteristics of the waste in the unit, including its potential for migration through soil, liners, or other containing structures;

(2) The hydrologic and geologic characteristics of the unit and the surrounding area;

(3) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground water;

(4) The quantity and direction of ground-water flow;

(5) The proximity to and withdrawal rates of current and potential ground-water users;

(6) The patterns of land use in the region;

(7) The potential for deposition or migration of waste constituents into subsurface physical structures, and into the root zone of food-chain crops and other vegetation;

(8) The potential for health risks caused by human exposure to waste constituents; and

(9) The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

(b) Prevention of any releases that may have adverse effects on human health or the environment due to migration of waste constituents in surface water, or wetlands or on the soil surface considering:

(1) The volume and physical and chemical characteristics of the waste in the unit;

(2) The effectiveness and reliability of containing, confining, and collecting systems and structures in preventing migration;

(3) The hydrologic characteristics of the unit and the surrounding area, including the topography of the land around the unit;

(4) The patterns of precipitation in the region;

(5) The quantity, quality, and direction of ground-water flow;

(6) The proximity of the unit to surface waters;

(7) The current and potential uses of nearby surface waters and any water quality standards established for those surface waters;

(8) The existing quality of surface waters and surface soils, including other sources of contamination and their cumulative impact on surface waters and surface soils;

(9) The patterns of land use in the region;

(10) The potential for health risks caused by human exposure to waste constituents; and

(11) The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.

(c) Prevention of any release that may have adverse effects on human health or the environment due to migration of waste constituents in the air, considering:

(1) The volume and physical and chemical characteristics of the waste in the unit, including its potential for the emission and dispersal of gases, aerosols and particulates;

(2) The effectiveness and reliability of systems and structures to reduce or prevent emissions of hazardous

constituents to the air;

(3) The operating characteristics of the unit;

(4) The atmospheric, meteorologic, and topographic characteristics of the unit and the surrounding area;

(5) The existing quality of the air, including other sources of contamination and their cumulative impact on the air;

(6) The potential for health risks caused by human exposure to waste constituents; and

(7) The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.

R315-264-602. Monitoring, Analysis, Inspection, Response, Reporting, and Corrective Action.

Monitoring, testing, analytical data, inspections, response, and reporting procedures and frequencies shall ensure compliance with Sections R315-264-601, 15, 33, 75, 76, 77, and 101 as well as meet any additional requirements needed to protect human health and the environment as specified in the permit.

R315-264-603. Post-Closure Care.

A miscellaneous unit that is a disposal unit shall be maintained in a manner that complies with Section R315-264-601 during the post-closure care period. In addition, if a treatment or storage unit has contaminated soils or ground water that cannot be completely removed or decontaminated during closure, then that unit shall also meet the requirements of Section R315-264-601 during post-closure care. The post-closure plan under Section R315-264-118 shall specify the procedures that will be used to satisfy this requirement.

R315-264-1030. Air Emission Standards for Process Vents -- Applicability.

(a) The regulations in Sections R315-1030 through 1036 apply to owners and operators of facilities that treat, store, or dispose of hazardous wastes, except as provided in Section R315-264-1.

(b) Except for Subsections R315-264-1034(d) and (e), Sections R315-1030 through 1036 apply to process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations that manage hazardous wastes with organic concentrations of at least 10 ppmw, if these operations are conducted in one of the following:

(1) A unit that is subject to the permitting requirements of Rule R315-270, or

(2) A unit, including a hazardous waste recycling unit, that is not exempt from permitting under the provisions of Subsection R315-262-34(a), i.e., a hazardous waste recycling unit that is not a 90-day tank or container, and that is located at a hazardous waste management facility otherwise subject to the permitting requirements of Rule R315-270, or

(3) A unit that is exempt from permitting under the provisions of Subsection R315-262-34(a), i.e., a "90-day" tank or container, and is not a recycling unit under the provisions of Section R315-261-6.

(c) For the owner and operator of a facility subject to Sections R315-1030 through 1036 and who received a final permit under Section 19-6-108 prior to December 6, 1996, the requirements of Sections R315-1030 through 1036 shall be incorporated into the permit when the permit is reissued in accordance with the requirements of Section R315-124-15 or reviewed in accordance with the requirements of Subsection R315-270-50(d). Until such date when the owner and operator receive a final permit incorporating the requirements of Sections R315-1030 through 1036, the owner and operator are subject to the requirements of , which is adopted by reference, 1030 through 1035, which is adopted by reference.

Note: The requirements of Sections R315-264-1032 through 1036 apply to process vents on hazardous waste recycling units previously exempt under Subsection R315-261-6(c)(1). Other exemptions under Section R315-261-4, and Subsection R35-264-1(g) are not affected by these requirements.

(d) The requirements of Sections R315-264-1030 through 1036 do not apply to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, Elkton, Virginia, provided that facility is operated in compliance with the requirements contained in a permit issued pursuant to the Utah Air Conservation Act. The requirements of Sections R315-264-1030 through 1036 shall apply to the facility upon termination of the permit issued pursuant to the Utah Air Conservation Act.

(e) The requirements of Sections R315-264-1030 through 1036 do not apply to the process vents at a facility where the facility owner or operator certifies that all of the process vents that would otherwise be subject to Sections R315-264-1030 through 1036 are equipped with and operating air emission controls in accordance with the process vent requirements of an applicable regulation codified under the Utah Air Conservation Act. The documentation of compliance under regulations codified under the Utah Air Conservation Act shall be kept with, or made readily available with, the facility operating record.

R315-264-1031. Definitions.

As used in Sections R315-264-1030 through 1036, all terms not defined herein shall have the meaning given them in RCRA and Rules R315-260 through 266.

(a) Air stripping operation is a desorption operation employed to transfer one or more volatile components from a liquid mixture into a gas (air) either with or without the application of heat to the liquid. Packed towers, spray towers, and bubble-cap, sieve, or valve-type plate towers are among the process configurations used for contacting the air and a liquid.

(b) Bottoms receiver means a container or tank used to receive and collect the heavier bottoms fractions of the distillation feed stream that remain in the liquid phase.

(c) Closed-vent system means a system that is not open to the atmosphere and that is composed of piping, connections, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device.

(d) Condenser means a heat-transfer device that reduces a thermodynamic fluid from its vapor phase to its liquid phase.

(e) Connector means flanged, screwed, welded, or other joined fittings used to connect two pipelines or a pipeline and a piece of equipment. For the purposes of reporting and recordkeeping, connector means flanged fittings that are not covered by insulation or other materials that prevent location of the fittings.

(f) Continuous recorder means a data-recording device recording an instantaneous data value at least once every 15 minutes.

(g) Control device means an enclosed combustion device, vapor recovery system, or flare. Any device the primary function of which is the recovery or capture of solvents or other organics for use, reuse, or sale, e.g., a primary condenser on a solvent recovery unit, is not a control device.

(h) Control device shutdown means the cessation of operation of a control device for any purpose.

(i) Distillate receiver means a container or tank used to receive and collect liquid material (condensed) from the overhead condenser of a distillation unit and from which the condensed liquid is pumped to larger storage tanks or other process units.

(j) Distillation operation means an operation, either batch or continuous, separating one or more feed stream(s) into two or more exit streams, each exit stream having component concentrations different from those in the feed stream(s). The

separation is achieved by the redistribution of the components between the liquid and vapor phase as they approach equilibrium within the distillation unit.

(k) Double block and bleed system means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

(l) Equipment means each valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, or flange or other connector, and any control devices or systems required by Sections R315-264-1030 through 1036.

(m) Flame zone means the portion of the combustion chamber in a boiler occupied by the flame envelope.

(n) Flow indicator means a device that indicates whether gas flow is present in a vent stream.

(o) First attempt at repair means to take rapid action for the purpose of stopping or reducing leakage of organic material to the atmosphere using best practices.

(p) Fractionation operation means a distillation operation or method used to separate a mixture of several volatile components of different boiling points in successive stages, each stage removing from the mixture some proportion of one of the components.

(q) Hazardous waste management unit shutdown means a work practice or operational procedure that stops operation of a hazardous waste management unit or part of a hazardous waste management unit. An unscheduled work practice or operational procedure that stops operation of a hazardous waste management unit or part of a hazardous waste management unit for less than 24 hours is not a hazardous waste management unit shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping operation are not hazardous waste management unit shutdowns.

(r) Hot well means a container for collecting condensate as in a steam condenser serving a vacuum-jet or steam-jet ejector.

(s) In gas/vapor service means that the piece of equipment contains or contacts a hazardous waste stream that is in the gaseous state at operating conditions.

(t) In heavy liquid service means that the piece of equipment is not in gas/vapor service or in light liquid service.

(u) In light liquid service means that the piece of equipment contains or contacts a waste stream where the vapor pressure of one or more of the organic components in the stream is greater than 0.3 kilopascals (kPa) at 20 degrees C, the total concentration of the pure organic components having a vapor pressure greater than 0.3 kilopascals (kPa) at 20 degrees C is equal to or greater than 20 percent by weight, and the fluid is a liquid at operating conditions.

(v) In situ sampling systems means nonextractive samplers or in-line samplers.

(w) In vacuum service means that equipment is operating at an internal pressure that is at least 5 kPa below ambient pressure.

(x) Malfunction means any sudden failure of a control device or a hazardous waste management unit or failure of a hazardous waste management unit to operate in a normal or usual manner, so that organic emissions are increased.

(y) Open-ended valve or line means any valve, except pressure relief valves, having one side of the valve seat in contact with hazardous waste and one side open to the atmosphere, either directly or through open piping.

(z) Pressure release means the emission of materials resulting from the system pressure being greater than the set pressure of the pressure relief device.

(aa) Process heater means a device that transfers heat liberated by burning fuel to fluids contained in tubes, including all fluids except water that are heated to produce steam.

(bb) Process vent means any open-ended pipe or stack that

is vented to the atmosphere either directly, through a vacuum-producing system, or through a tank (e.g., distillate receiver, condenser, bottoms receiver, surge control tank, separator tank, or hot well) associated with hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations.

(cc) Repaired means that equipment is adjusted, or otherwise altered, to eliminate a leak.

(dd) Sampling connection system means an assembly of equipment within a process or waste management unit used during periods of representative operation to take samples of the process or waste fluid. Equipment used to take non-routine grab samples is not considered a sampling connection system.

(ee) Sensor means a device that measures a physical quantity or the change in a physical quantity, such as temperature, pressure, flow rate, pH, or liquid level.

(ff) Separator tank means a device used for separation of two immiscible liquids.

(gg) Solvent extraction operation means an operation or method of separation in which a solid or solution is contacted with a liquid solvent, the two being mutually insoluble, to preferentially dissolve and transfer one or more components into the solvent.

(hh) Startup means the setting in operation of a hazardous waste management unit or control device for any purpose.

(ii) Steam stripping operation means a distillation operation in which vaporization of the volatile constituents of a liquid mixture takes place by the introduction of steam directly into the charge.

(jj) Surge control tank means a large-sized pipe or storage reservoir sufficient to contain the surging liquid discharge of the process tank to which it is connected.

(kk) Thin-film evaporation operation means a distillation operation that employs a heating surface consisting of a large diameter tube that may be either straight or tapered, horizontal or vertical. Liquid is spread on the tube wall by a rotating assembly of blades that maintain a close clearance from the wall or actually ride on the film of liquid on the wall.

(ll) Vapor incinerator means any enclosed combustion device that is used for destroying organic compounds and does not extract energy in the form of steam or process heat.

(mm) Vented means discharged through an opening, typically an open-ended pipe or stack, allowing the passage of a stream of liquids, gases, or fumes into the atmosphere. The passage of liquids, gases, or fumes is caused by mechanical means such as compressors or vacuum-producing systems or by process-related means such as evaporation produced by heating and not caused by tank loading and unloading, working losses, or by natural means such as diurnal temperature changes.

R315-264-1032. Standards: Process Vents.

(a) The owner or operator of a facility with process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations managing hazardous wastes with organic concentrations of at least 10 ppmw shall either:

(1) Reduce total organic emissions from all affected process vents at the facility below 1.4 kg/h (3 lb/h) and 2.8 Mg/yr (3.1 tons/yr), or

(2) Reduce, by use of a control device, total organic emissions from all affected process vents at the facility by 95 weight percent.

(b) If the owner or operator installs a closed-vent system and control device to comply with the provisions of Subsection R315-264-1032(a) the closed-vent system and control device shall meet the requirements of Section R315-264-1033.

(c) Determinations of vent emissions and emission reductions or total organic compound concentrations achieved by add-on control devices may be based on engineering

calculations or performance tests. If performance tests are used to determine vent emissions, emission reductions, or total organic compound concentrations achieved by add-on control devices, the performance tests shall conform with the requirements of Subsection R315-264-1034(c).

(d) When an owner or operator and the Director do not agree on determinations of vent emissions and/or emission reductions or total organic compound concentrations achieved by add-on control devices based on engineering calculations, the procedures in Subsection R315-264-1034(c) shall be used to resolve the disagreement.

R315-264-1033. Standards: Closed-Vent Systems and Control Devices.

(a)(1) Owners or operators of closed-vent systems and control devices used to comply with provisions of Sections R315-264-1030 through 1036 shall comply with the provisions of Section R315-264-1033.

(2)(i) The owner or operator of an existing facility who cannot install a closed-vent system and control device to comply with the provisions of Sections R315-264-1030 through 1036 on the effective date that the facility becomes subject to the provisions of Sections R315-264-1030 through 1036 shall prepare an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The controls shall be installed as soon as possible, but the implementation schedule may allow up to 30 months after the effective date that the facility becomes subject to Sections R315-264-1030 through 1036 for installation and startup.

(ii) Any unit that begins operation after December 21, 1990, and is subject to the provisions of Sections R315-264-1030 through 1036 when operation begins, shall comply with the rules immediately, i.e., shall have control devices installed and operating on startup of the affected unit; the 30-month implementation schedule does not apply.

(iii) The owner or operator of any facility in existence on the effective date of a statutory or regulatory amendment that renders the facility subject to Sections R315-264-1030 through 1036 shall comply with all requirements of Sections R315-264-1030 through 1036 as soon as practicable but no later than 30 months after the amendment's effective date. When control equipment required by Sections R315-264-1030 through 1036 cannot be installed and begin operation by the effective date of the amendment, the facility owner or operator shall prepare an implementation schedule that includes the following information: Specific calendar dates for award of contracts or issuance of purchase orders for the control equipment, initiation of on-site installation of the control equipment, completion of the control equipment installation, and performance of any testing to demonstrate that the installed equipment meets the applicable standards of Sections R315-264-1030 through 1036. The owner or operator shall enter the implementation schedule in the operating record or in a permanent, readily available file located at the facility.

(iv) Owners and operators of facilities and units that become newly subject to the requirements of Sections R315-264-1030 through 1036 after December 8, 1997, due to an action other than those described in Subsection R315-264-1033(a)(2)(iii) shall comply with all applicable requirements immediately, i.e., shall have control devices installed and operating on the date the facility or unit becomes subject to Sections R315-264-1030 through 1036; the 30-month implementation schedule does not apply.

(b) A control device involving vapor recovery, e.g., a condenser or adsorber, shall be designed and operated to recover the organic vapors vented to it with an efficiency of 95 weight percent or greater unless the total organic emission limits of Subsection R315-264-1032(a)(1) for all affected process

vents can be attained at an efficiency less than 95 weight percent.

(c) An enclosed combustion device, e.g., a vapor incinerator, boiler, or process heater, shall be designed and operated to reduce the organic emissions vented to it by 95 weight percent or greater; to achieve a total organic compound concentration of 20 ppmv, expressed as the sum of the actual compounds, not carbon equivalents, on a dry basis corrected to 3 percent oxygen; or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760 degrees C. If a boiler or process heater is used as the control device, then the vent stream shall be introduced into the flame zone of the boiler or process heater.

(d)(1) A flare shall be designed for and operated with no visible emissions as determined by the methods specified in Subsection R315-264-1033(e)(1), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

(2) A flare shall be operated with a flame present at all times, as determined by the methods specified in Subsection R315-264-1033(f)(2)(iii).

(3) A flare shall be used only if the net heating value of the gas being combusted is 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or if the net heating value of the gas being combusted is 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in Subsection R315-264-1033(e)(2).

(4)(i) A steam-assisted or nonassisted flare shall be designed for and operated with an exit velocity, as determined by the methods specified in Subsection R315-264-1033(e)(3), less than 18.3 m/s (60 ft/s), except as provided in Subsections R315-264-133(d)(4)(ii) and (iii).

(ii) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in Subsection R315-264-1033(e)(3), equal to or greater than 18.3 m/s (60 ft/s) but less than 122 m/s (400 ft/s) is allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in Subsection R315-264-1033(e)(3), less than the velocity, V_{max} , as determined by the method specified in Subsection R315-264-1033(e)(4) and less than 122 m/s (400 ft/s) is allowed.

(5) An air-assisted flare shall be designed and operated with an exit velocity less than the velocity, V_{max} , as determined by the method specified in Subsection R315-264-1033(e)(5).

(6) A flare used to comply with Section R315-24-1033 shall be steam-assisted, air-assisted, or nonassisted.

(e)(1) Reference Method 22 in 40 CFR part 60 shall be used to determine the compliance of a flare with the visible emission provisions of Sections R315-264-1030 through 1036. The observation period is 2 hours and shall be used according to Method 22.

(2) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$H_t = K$ times the summation product of C_i and H_i from i equals 1 to n

where:

H_t = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 degrees C and 760 mm Hg, but the standard temperature for determining the volume corresponding to 1 mol is 20 degrees C;

K = Constant, 1.74×10^{-7} (1/ppm) (g mol/scm) (MJ/kcal) where standard temperature for (g mol/scm) is 20 degrees C;

C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 in 40 CFR part 60 and measured for hydrogen and carbon monoxide

by ASTM D 1946-82, incorporated by reference as specified in Section R315-260-11; and

H_i = Net heat of combustion of sample component i , kcal/9 mol at 25 degrees C and 760 mm Hg. The heats of combustion may be determined using ASTM D 2382-83, incorporated by reference as specified in Section R315-260-11, if published values are not available or cannot be calculated.

(3) The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate, in units of standard temperature and pressure, as determined by Reference Methods 2, 2A, 2C, or 2D in 40 CFR part 60 as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

(4) The maximum allowed velocity in m/s, V_{max} , for a flare complying with Subsection R315-264-1033(d)(4)(iii) shall be determined by the following equation:

$$\text{Log}_{10}(V_{max}) = (HT+28.8)/31.7$$

where:

28.8 = Constant,

31.7 = Constant,

HT = The net heating value as determined in Subsection R315-264-1033(e)(2).

(5) The maximum allowed velocity in m/s, V_{max} , for an air-assisted flare shall be determined by the following equation:

$$V_{max} = 8.706 + 0.7084 (HT)$$

where:

8.706 = Constant,

0.7084 = Constant,

HT = The net heating value as determined in Subsection R315-264-1033(e)(2).

(f) The owner or operator shall monitor and inspect each control device required to comply with Section R315-264-1033 to ensure proper operation and maintenance of the control device by implementing the following requirements:

(1) Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow indicator that provides a record of vent stream flow from each affected process vent to the control device at least once every hour. The flow indicator sensor shall be installed in the vent stream at the nearest feasible point to the control device inlet but before the point at which the vent streams are combined.

(2) Install, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor control device operation as specified below:

(i) For a thermal vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of plus or minus 1 percent of the temperature being monitored in degrees C or +/- 0.5 degrees C, whichever is greater. The temperature sensor shall be installed at a location in the combustion chamber downstream of the combustion zone.

(ii) For a catalytic vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature at two locations and have an accuracy of plus or minus 1 percent of the temperature being monitored in degrees C or +/- 0.5 degrees C, whichever is greater. One temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed inlet and a second temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed outlet.

(iii) For a flare, a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame.

(iv) For a boiler or process heater having a design heat input capacity less than 44 MW, a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of plus or minus 1 percent of the temperature being monitored in degrees C or plus or minus 0.5 degrees C, whichever is greater. The temperature sensor shall be installed

at a location in the furnace downstream of the combustion zone.

(v) For a boiler or process heater having a design heat input capacity greater than or equal to 44 MW, a monitoring device equipped with a continuous recorder to measure a parameter(s) that indicates good combustion operating practices are being used.

(vi) For a condenser, either:

(A) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the condenser, or

(B) A temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature with an accuracy of plus or minus 1 percent of the temperature being monitored in degrees Celsius, or plus or minus 0.5 degrees C, whichever is greater. The temperature sensor shall be installed at a location in the exhaust vent stream from the condenser exit, i.e., product side.

(vii) For a carbon adsorption system that regenerates the carbon bed directly in the control device such as a fixed-bed carbon adsorber, either:

(A) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the carbon bed, or

(B) A monitoring device equipped with a continuous recorder to measure a parameter that indicates the carbon bed is regenerated on a regular, predetermined time cycle.

(3) Inspect the readings from each monitoring device required by Subsections R315-24-1033(f)(1) and (2) at least once each operating day to check control device operation and, if necessary, immediately implement the corrective measures necessary to ensure the control device operates in compliance with the requirements of Section R315-264-1033.

(g) An owner or operator using a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device shall replace the existing carbon in the control device with fresh carbon at a regular, predetermined time interval that is no longer than the carbon service life established as a requirement of Subsection R315-264-1035(b)(4)(iii)(F).

(h) An owner or operator using a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device shall replace the existing carbon in the control device with fresh carbon on a regular basis by using one of the following procedures:

(1) Monitor the concentration level of the organic compounds in the exhaust vent stream from the carbon adsorption system on a regular schedule, and replace the existing carbon with fresh carbon immediately when carbon breakthrough is indicated. The monitoring frequency shall be daily or at an interval no greater than 20 percent of the time required to consume the total carbon working capacity established as a requirement of Subsection R315-264-1035(b)(4)(iii)(G), whichever is longer.

(2) Replace the existing carbon with fresh carbon at a regular, predetermined time interval that is less than the design carbon replacement interval established as a requirement of Subsection R315-264-1035(b)(4)(iii)(G).

(i) An alternative operational or process parameter may be monitored if it can be demonstrated that another parameter will ensure that the control device is operated in conformance with these standards and the control device's design specifications.

(j) An owner or operator of an affected facility seeking to comply with the provisions of Rule R315-264 by using a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system is required to develop documentation including sufficient information to describe the control device operation and identify the process parameter or parameters that indicate proper operation and maintenance of the control device.

(k) A closed-vent system shall meet either of the following design requirements:

(1) A closed-vent system shall be designed to operate with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background as determined by the procedure in Subsection R315-264-1034(b), and by visual inspections; or

(2) A closed-vent system shall be designed to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gauge or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating.

(l) The owner or operator shall monitor and inspect each closed-vent system required to comply with Section R315-264-1033 to ensure proper operation and maintenance of the closed-vent system by implementing the following requirements:

(1) Each closed-vent system that is used to comply with Subsection R315-264-1033(k)(1) shall be inspected and monitored in accordance with the following requirements:

(i) An initial leak detection monitoring of the closed-vent system shall be conducted by the owner or operator on or before the date that the system becomes subject to Section R315-264-1033. The owner or operator shall monitor the closed-vent system components and connections using the procedures specified in Subsection R315-264-1034(b) to demonstrate that the closed-vent system operates with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background.

(ii) After initial leak detection monitoring required in Subsection R315-264-1033(l)(1)(i), the owner or operator shall inspect and monitor the closed-vent system as follows:

(A) Closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed, e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange, shall be visually inspected at least once per year to check for defects that could result in air pollutant emissions. The owner or operator shall monitor a component or connection using the procedures specified in Subsection R315-264-1034(b) to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced, e.g., a section of damaged hard piping is replaced with new hard piping, or the connection is unsealed, e.g., a flange is unbolted.

(B) Closed-vent system components or connections other than those specified in Subsection R315-264-1033(l)(1)(ii)(A) shall be monitored annually and at other times as requested by the Director, except as provided for in Subsection R315-264-1033(o), using the procedures specified in Subsection R315-264-1034(b) to demonstrate that the components or connections operate with no detectable emissions.

(iii) In the event that a defect or leak is detected, the owner or operator shall repair the defect or leak in accordance with the requirements of Subsection R315-264-1033(l)(3).

(iv) The owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in Subsection R315-264-1035.

(2) Each closed-vent system that is used to comply with Subsection R315-264-1033(k)(2) shall be inspected and monitored in accordance with the following requirements:

(i) The closed-vent system shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork or piping or loose connections.

(ii) The owner or operator shall perform an initial inspection of the closed-vent system on or before the date that the system becomes subject to Section R315-264-1033. Thereafter, the owner or operator shall perform the inspections

at least once every year.

(iii) In the event that a defect or leak is detected, the owner or operator shall repair the defect in accordance with the requirements of Subsection R315-264-1033(1)(3).

(iv) The owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in Subsection R315-264-1035.

(3) The owner or operator shall repair all detected defects as follows:

(i) Detectable emissions, as indicated by visual inspection, or by an instrument reading greater than 500 ppmv above background, shall be controlled as soon as practicable, but not later than 15 calendar days after the emission is detected, except as provided for in Subsection R315-264-1033(1)(3)(iii).

(ii) A first attempt at repair shall be made no later than 5 calendar days after the emission is detected.

(iii) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown, or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be completed by the end of the next process unit shutdown.

(iv) The owner or operator shall maintain a record of the defect repair in accordance with the requirements specified in Section R315-264-1035.

(m) Closed-vent systems and control devices used to comply with provisions of Sections R315-264-1033 through 1036 shall be operated at all times when emissions may be vented to them.

(n) The owner or operator using a carbon adsorption system to control air pollutant emissions shall document that all carbon that is a hazardous waste and that is removed from the control device is managed in one of the following manners, regardless of the average volatile organic concentration of the carbon:

(1) Regenerated or reactivated in a thermal treatment unit that meets one of the following:

(i) The owner or operator of the unit has been issued a final permit under Rule R315-270 which implements the requirements of Sections R315-264-600 through 603; or

(ii) The unit is equipped with and operating air emission controls in accordance with the applicable requirements of Sections R315-264-1030 through 1036 and 1080 through 1090 or 40 CFR 265.1030 through 1035 and 1080 through 1090, which are adopted by reference; or

(iii) The unit is equipped with and operating air emission controls in accordance with a national emission standard for hazardous air pollutants under Section R315-307-214-1, which incorporates 40 CFR part 61 or Section R307-214-2, which incorporates 40 CFR part 63.

(2) Incinerated in a hazardous waste incinerator for which the owner or operator either:

(i) Has been issued a final permit under Rule R315-270 which implements the requirements of Sections R315-264-340 through 351; or

(ii) Has designed and operates the incinerator in accordance with the interim status requirements of 40 CFR 265.340 through 352, which are adopted by reference.

(3) Burned in a boiler or industrial furnace for which the owner or operator either:

(i) Has been issued a final permit under Rule R315-270 which implements the requirements of Sections R315-266-100 through 112; or

(ii) Has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of Sections R315-266-100 through 112.

(o) Any components of a closed-vent system that are designated, as described in Subsection R315-264-1035(c)(9), as

unsafe to monitor are exempt from the requirements of Subsection R315-264-1033(1)(1)(ii)(B) if:

(1) The owner or operator of the closed-vent system determines that the components of the closed-vent system are unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with Subsection R315-264-1033(1)(1)(ii)(B); and

(2) The owner or operator of the closed-vent system adheres to a written plan that requires monitoring the closed-vent system components using the procedure specified in Subsection R315-264-1033(1)(1)(ii)(B) as frequently as practicable during safe-to-monitor times.

R315-264-1034. Test Methods and Procedures.

(a) Each owner or operator subject to the provisions of Sections R315-264-1030 through 1036 shall comply with the test methods and procedures requirements provided in Section R315-264-1034.

(b) When a closed-vent system is tested for compliance with no detectable emissions, as required in Subsection R315-264-1033(1), the test shall comply with the following requirements:

(1) Monitoring shall comply with Reference Method 21 in 40 CFR part 60.

(2) The detection instrument shall meet the performance criteria of Reference Method 21.

(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21.

(4) Calibration gases shall be:

(i) Zero air, less than 10 ppm of hydrocarbon in air.

(ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.

(5) The background level shall be determined as set forth in Reference Method 21.

(6) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

(7) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(c) Performance tests to determine compliance with Subsection R315-264-1032(a) and with the total organic compound concentration limit of Subsection R315-264-1033(c) shall comply with the following:

(1) Performance tests to determine total organic compound concentrations and mass flow rates entering and exiting control devices shall be conducted and data reduced in accordance with the following reference methods and calculation procedures:

(i) Method 2 in 40 CFR part 60 for velocity and volumetric flow rate.

(ii) Method 18 or Method 25A in 40 CFR part 60, appendix A, for organic content. If Method 25A is used, the organic HAP used as the calibration gas shall be the single organic HAP representing the largest percent by volume of the emissions. The use of Method 25A is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.

(iii) Each performance test shall consist of three separate runs; each run conducted for at least 1 hour under the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. For the purpose of determining total organic compound concentrations and mass flow rates, the average of results of all runs shall apply. The average shall be computed on a time-weighted basis.

(iv) Total organic mass flow rates shall be determined by

the following equation:

(A) For sources utilizing Method 18.

The equation found in 40 CFR 264.1034(c)(1)(iv)(A), 2015 edition, is adopted and incorporated by reference.

Where:

Eh = Total organic mass flow rate, kg/h;

Q2sd = Volumetric flow rate of gases entering or exiting control device, as determined by Method 2, dscm/h;

n = Number of organic compounds in the vent gas;

Ci = Organic concentration in ppm, dry basis, of compound i in the vent gas, as determined by Method 18;

MWi = Molecular weight of organic compound i in the vent gas, kg/kg-mol;

0.0416 = Conversion factor for molar volume, kg-mol/m³, at 293 K and 760 mm Hg;

10⁻⁶ = Conversion from ppm

(B) For sources utilizing Method 25A.

Eh = (Q)(C)(MW)(0.0416)(10⁻⁶)

Where:

Eh = Total organic mass flow rate, kg/h;

Q = Volumetric flow rate of gases entering or exiting control device, as determined by Method 2, dscm/h;

C = Organic concentration in ppm, dry basis, as determined by Method 25A;

MW = Molecular weight of propane, 44;

0.0416 = Conversion factor for molar volume, kg-mol/m³, at 293 K and 760 mm Hg;

10⁻⁶ = Conversion from ppm.

(v) The annual total organic emission rate shall be determined by the following equation:

EA = (Eh)(H)

where:

EA = Total organic mass emission rate, kg/y;

Eh = Total organic mass flow rate for the process vent, kg/h;

H = Total annual hours of operations for the affected unit, h.

(vi) Total organic emissions from all affected process vents at the facility shall be determined by summing the hourly total organic mass emission rates, Eh as determined in Subsection R315-264-1034(c)(1)(iv), and by summing the annual total organic mass emission rates, EA, as determined in Subsection R315-264-1034(c)(1)(v), for all affected process vents at the facility.

(2) The owner or operator shall record such process information as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

(3) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(i) Sampling ports adequate for the test methods specified in Subsection R315-264-1034(c)(1).

(ii) Safe sampling platform(s).

(iii) Safe access to sampling platform(s).

(iv) Utilities for sampling and testing equipment.

(4) For the purpose of making compliance determinations, the time-weighted average of the results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs shall be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner or operator's control, compliance may, upon the Director's approval, be determined using the average of the results of the two other runs.

(d) To show that a process vent associated with a hazardous waste distillation, fractionation, thin-film

evaporation, solvent extraction, or air or steam stripping operation is not subject to the requirements of Sections R315-264-1030 through 1036, the owner or operator shall make an initial determination that the time-weighted, annual average total organic concentration of the waste managed by the waste management unit is less than 10 ppmw using one of the following two methods:

(1) Direct measurement of the organic concentration of the waste using the following procedures:

(i) The owner or operator shall take a minimum of four grab samples of waste for each waste stream managed in the affected unit under process conditions expected to cause the maximum waste organic concentration.

(ii) For waste generated onsite, the grab samples shall be collected at a point before the waste is exposed to the atmosphere such as in an enclosed pipe or other closed system that is used to transfer the waste after generation to the first affected distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation. For waste generated offsite, the grab samples shall be collected at the inlet to the first waste management unit that receives the waste provided the waste has been transferred to the facility in a closed system such as a tank truck and the waste is not diluted or mixed with other waste.

(iii) Each sample shall be analyzed and the total organic concentration of the sample shall be computed using Method 9060A, incorporated by reference under Section R315-260-11, of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, or analyzed for its individual organic constituents.

(iv) The arithmetic mean of the results of the analyses of the four samples shall apply for each waste stream managed in the unit in determining the time-weighted, annual average total organic concentration of the waste. The time-weighted average is to be calculated using the annual quantity of each waste stream processed and the mean organic concentration of each waste stream managed in the unit.

(2) Using knowledge of the waste to determine that its total organic concentration is less than 10 ppmw. Documentation of the waste determination is required. Examples of documentation that shall be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the waste is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct measurement to generate a waste stream having a total organic content less than 10 ppmw, or prior speciation analysis results on the same waste stream where it can also be documented that no process changes have occurred since that analysis that could affect the waste total organic concentration.

(e) The determination that distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations manage hazardous wastes with time-weighted, annual average total organic concentrations less than 10 ppmw shall be made as follows:

(1) By the effective date that the facility becomes subject to the provisions of Sections R315-264-1030 through 1036 or by the date when the waste is first managed in a waste management unit, whichever is later, and

(2) For continuously generated waste, annually, or

(3) Whenever there is a change in the waste being managed or a change in the process that generates or treats the waste.

(f) When an owner or operator and the Director do not agree on whether a distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation manages a hazardous waste with organic concentrations of at least 10 ppmw based on knowledge of the

waste, the dispute may be resolved by using direct measurement as specified at Subsection R315-264-1034(d)(1).

R315-264-1035. Recordkeeping Requirements.

(a)(1) Each owner or operator subject to the provisions of Sections R315-264-1030 through 1036 shall comply with the recordkeeping requirements of Section R315-264-1035.

(2) An owner or operator of more than one hazardous waste management unit subject to the provisions of Sections R315-264-1030 through 1036 may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.

(b) Owners and operators shall record the following information in the facility operating record:

(1) For facilities that comply with the provisions of Subsection R315-264-1033(a)(2), an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The schedule shall also include a rationale of why the installation cannot be completed at an earlier date. The implementation schedule shall be in the facility operating record by the effective date that the facility becomes subject to the provisions of Sections R315-264-1030 through 1036.

(2) Up-to-date documentation of compliance with the process vent standards in Section R315-264-1032, including:

(i) Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility, i.e., the total emissions for all affected vents at the facility, and the approximate location within the facility of each affected unit, e.g., identify the hazardous waste management units on a facility plot plan.

(ii) Information and data supporting determinations of vent emissions and emission reductions achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, determinations of vent emissions and emission reductions shall be made using operating parameter values, e.g., temperatures, flow rates, or vent stream organic compounds and concentrations, that represent the conditions that result in maximum organic emissions, such as when the waste management unit is operating at the highest load or capacity level reasonably expected to occur. If the owner or operator takes any action, e.g., managing a waste of different composition or increasing operating hours of affected waste management units, that would result in an increase in total organic emissions from affected process vents at the facility, then a new determination is required.

(3) Where an owner or operator chooses to use test data to determine the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan. The test plan shall include:

(i) A description of how it is determined that the planned test is going to be conducted when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. This shall include the estimated or design flow rate and organic content of each vent stream and define the acceptable operating ranges of key process and control device parameters during the test program.

(ii) A detailed engineering description of the closed-vent system and control device including:

(A) Manufacturer's name and model number of control device.

(B) Type of control device.

(C) Dimensions of the control device.

(D) Capacity.

(E) Construction materials.

(iii) A detailed description of sampling and monitoring

procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

(4) Documentation of compliance with Section R315-264-1033 shall include the following information:

(i) A list of all information references and sources used in preparing the documentation.

(ii) Records, including the dates, of each compliance test required by Subsection R315-264-1033(k).

(iii) If engineering calculations are used, a design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions," incorporated by reference as specified in Section R315-260-11, or other engineering texts acceptable to the Director that present basic control device design information. Documentation provided by the control device manufacturer or vendor that describes the control device design in accordance with Subsections R315-264-1035(b)(4)(iii)(A) through (b)(4)(iii)(G) may be used to comply with this requirement. The design analysis shall address the vent stream characteristics and control device operation parameters as specified below.

(A) For a thermal vapor incinerator, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.

(B) For a catalytic vapor incinerator, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

(C) For a boiler or process heater, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average flame zone temperatures, combustion zone residence time, and description of method and location where the vent stream is introduced into the combustion zone.

(D) For a flare, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also consider the requirements specified in Subsection R315-264-1033(d).

(E) For a condenser, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design outlet organic compound concentration level, design average temperature of the condenser exhaust vent stream, and design average temperatures of the coolant fluid at the condenser inlet and outlet.

(F) For a carbon adsorption system such as a fixed-bed adsorber that regenerates the carbon bed directly onsite in the control device, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design exhaust vent stream organic compound concentration level, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total steam flow over the period of each complete carbon bed regeneration cycle, duration of the carbon bed steaming and cooling/drying cycles, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon.

(G) For a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall

also establish the design outlet organic concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.

(iv) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur.

(v) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of 95 percent or greater unless the total organic concentration limit of Subsection R315-264-1032(a) is achieved at an efficiency less than 95 weight percent or the total organic emission limits of Subsection R315-264-1032(a) for affected process vents at the facility can be attained by a control device involving vapor recovery at an efficiency less than 95 weight percent. A statement provided by the control device manufacturer or vendor certifying that the control equipment meets the design specifications may be used to comply with this requirement.

(vi) If performance tests are used to demonstrate compliance, all test results.

(c) Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of Rule R315-264 shall be recorded and kept up-to-date in the facility operating record. The information shall include:

(1) Description and date of each modification that is made to the closed-vent system or control device design.

(2) Identification of operating parameter, description of monitoring device, and diagram of monitoring sensor location or locations used to comply with Subsections R315-264-1033(f)(1) and (f)(2).

(3) Monitoring, operating, and inspection information required by Subsections R315-264-1033(f) through (k).

(4) Date, time, and duration of each period that occurs while the control device is operating when any monitored parameter exceeds the value established in the control device design analysis as specified below:

(i) For a thermal vapor incinerator designed to operate with a minimum residence time of 0.50 second at a minimum temperature of 760 degrees C, period when the combustion temperature is below 760 degrees C.

(ii) For a thermal vapor incinerator designed to operate with an organic emission reduction efficiency of 95 weight percent or greater, period when the combustion zone temperature is more than 28 degrees C below the design average combustion zone temperature established as a requirement of Subsection R315-264-1035(b)(4)(iii)(A).

(iii) For a catalytic vapor incinerator, period when:

(A) Temperature of the vent stream at the catalyst bed inlet is more than 28 degrees C below the average temperature of the inlet vent stream established as a requirement of Subsection R315-264-1035(b)(4)(iii)(B), or

(B) Temperature difference across the catalyst bed is less than 80 percent of the design average temperature difference established as a requirement of Subsection R315-264-1035(b)(4)(iii)(B).

(iv) For a boiler or process heater, period when:

(A) Flame zone temperature is more than 28 degrees C below the design average flame zone temperature established as a requirement of Subsection R315-264-1035(b)(4)(iii)(C), or

(B) Position changes where the vent stream is introduced to the combustion zone from the location established as a requirement of Subsection R315-264-1035(b)(4)(iii)(C).

(v) For a flare, period when the pilot flame is not ignited.

(vi) For a condenser that complies with Subsection R315-

264-1033(f)(2)(vi)(A), period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the condenser are more than 20 percent greater than the design outlet organic compound concentration level established as a requirement of Subsection R315-264-1035(b)(4)(iii)(E).

(vii) For a condenser that complies with Subsection R315-264-1033(f)(2)(vi)(B), period when:

(A) Temperature of the exhaust vent stream from the condenser is more than 6 degrees C above the design average exhaust vent stream temperature established as a requirement of Subsection R315-264-1035(b)(4)(iii)(E); or

(B) Temperature of the coolant fluid exiting the condenser is more than 6 degrees C above the design average coolant fluid temperature at the condenser outlet established as a requirement of Subsection R315-264-1035(b)(4)(iii)(E).

(viii) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device and complies with Subsection R315-264-1033(f)(2)(vii)(A), period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the carbon bed are more than 20 percent greater than the design exhaust vent stream organic compound concentration level established as a requirement of Subsection R315-264-1035(b)(4)(iii)(F).

(ix) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device and complies with Subsection R315-264-1033(f)(2)(vii)(B), period when the vent stream continues to flow through the control device beyond the predetermined carbon bed regeneration time established as a requirement of Subsection R315-264-1035(b)(4)(iii)(F).

(5) Explanation for each period recorded under Subsection R315-264-1035(4) of the cause for control device operating parameter exceeding the design value and the measures implemented to correct the control device operation.

(6) For a carbon adsorption system operated subject to requirements specified in Subsection R315-264-1033(g) or (h)(2), date when existing carbon in the control device is replaced with fresh carbon.

(7) For a carbon adsorption system operated subject to requirements specified in Subsection R315-264-1033(h)(1), a log that records:

(i) Date and time when control device is monitored for carbon breakthrough and the monitoring device reading.

(ii) Date when existing carbon in the control device is replaced with fresh carbon.

(8) Date of each control device startup and shutdown.

(9) An owner or operator designating any components of a closed-vent system as unsafe to monitor pursuant to Subsection R315-264-1033(o) shall record in a log that is kept in the facility operating record the identification of closed-vent system components that are designated as unsafe to monitor in accordance with the requirements of Subsection R315-264-1033(o), an explanation for each closed-vent system component stating why the closed-vent system component is unsafe to monitor, and the plan for monitoring each closed-vent system component.

(10) When each leak is detected as specified in Subsection R315-264-1033(l), the following information shall be recorded:

(i) The instrument identification number, the closed-vent system component identification number, and the operator name, initials, or identification number.

(ii) The date the leak was detected and the date of first attempt to repair the leak.

(iii) The date of successful repair of the leak.

(iv) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be nonreparable.

(v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(A) The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(B) If delay of repair was caused by depletion of stocked parts, there shall be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

(d) Records of the monitoring, operating, and inspection information required by Subsections R315-264-1035(c)(3) through (c)(10) shall be maintained by the owner or operator for at least 3 years following the date of each occurrence, measurement, maintenance, corrective action, or record.

(e) For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the Director shall specify the appropriate recordkeeping requirements.

(f) Up-to-date information and data used to determine whether or not a process vent is subject to the requirements in Section R315-264-1032 including supporting documentation as required by Subsection R315-264-1034(d)(2) when application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced is used, shall be recorded in a log that is kept in the facility operating record.

R315-264-1036. Reporting Requirements.

(a) A semiannual report shall be submitted by owners and operators subject to the requirements of Sections R315-264-1030 through 1036 to the Director by dates specified by the Director. The report shall include the following information:

(1) The Environmental Protection Agency identification number, name, and address of the facility.

(2) For each month during the semiannual reporting period, dates when the control device exceeded or operated outside of the design specifications as defined in Subsection R315-264-1035(c)(4) and as indicated by the control device monitoring required by Subsection R315-264-1033(f) and such exceedances were not corrected within 24 hours, or that a flare operated with visible emissions as defined in Subsection R315-264-1033(d) and as determined by Method 22 monitoring, the duration and cause of each exceedance or visible emissions, and any corrective measures taken.

(b) If, during the semiannual reporting period, the control device does not exceed or operate outside of the design specifications as defined in Subsection R315-264-1035(c)(4) for more than 24 hours or a flare does not operate with visible emissions as defined in Subsection R315-264-1033(d), a report to the Director is not required.

R315-264-1050. Air Emission Standards for Equipment Leaks -- Applicability.

(a) The regulations in Sections R315-264-1050 through 1065 apply to owners and operators of facilities that treat, store, or dispose of hazardous wastes, except as provided in Section R315-264-1.

(b) Except as provided in Subsection R315-264-1064(k), Sections R315-264-1050 through 1065 apply to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight that are managed in one of the following:

(1) A unit that is subject to the permitting requirements of Rule R315-270, or

(2) A unit, including a hazardous waste recycling unit, that is not exempt from permitting under the provisions of Subsection R315-262-34(a), i.e., a hazardous waste recycling

unit that is not a "90-day" tank or container, and that is located at a hazardous waste management facility otherwise subject to the permitting requirements of Rule R315-270, or

(3) A unit that is exempt from permitting under the provisions of Subsection R315-262-34(a), i.e., a "90-day" tank or container, and is not a recycling unit under the provisions of Section R315-261-6.

(c) For the owner or operator of a facility subject to Sections R315-264-1050 through 1065 and who received a final permit under RCRA section 3005 prior to December 6, 1996, the requirements of Sections R315-264-1050 through 1065 shall be incorporated into the permit when the permit is reissued in accordance with the requirements of Section R315-124-15 or reviewed in accordance with the requirements of Subsection R315-270-50(d). Until such date when the owner or operator receives a final permit incorporating the requirements of Sections R315-264-1050 through 1065, the owner or operator is subject to the requirements of 40 CFR 265.1050 through 1064, which are adopted by reference.

(d) Each piece of equipment to which Sections R315-264-1050 through 1065 applies shall be marked in such a manner that it can be distinguished readily from other pieces of equipment.

(e) Equipment that is in vacuum service is excluded from the requirements of Sections R315-264-1052 to 1060 if it is identified as required in Subsection R315-264-1064(g)(5).

(f) Equipment that contains or contacts hazardous waste with an organic concentration of at least 10 percent by weight for less than 300 hours per calendar year is excluded from the requirements of Sections R315-264-1052 through 1060 if it is identified, as required in Subsection R315-264-1064(g)(6).

(g) The requirements of Sections R315-264-1050 through 1065 do not apply to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, Elkton, Virginia, provided that facility is operated in compliance with the requirements contained in a permit issued pursuant to the Utah Air Conservation Act. The requirements of Sections R315-264-1050 through 1065 shall apply to the facility upon termination of the permit issued pursuant to the Utah Air Conservation Act.

(h) Purged coatings and solvents from surface coating operations subject to the national emission standards for hazardous air pollutants (NESHAP) for the surface coating of automobiles and light-duty trucks at R307-214-2(61), which incorporates 40 CFR part 63 subpart III, are not subject to the requirements of Sections R315-264-1050 through 1065.

Note: The requirements of Sections R315-264-1052 through 1065 apply to equipment associated with hazardous waste recycling units previously exempt under Subsection R315-261-6(c)(1). Other exemptions under Section R315-261-4, and Subsection R315-264-1(g) are not affected by these requirements.

R315-264-1051. Definitions.

As used in Sections R315-264-1050 through 1065, all terms shall have the meaning given them in Section R315-264-1031, RCRA, and Rules R315-260 through 266.

R315-264-1052. Standards: Pumps in Light Liquid Service.

(a)(1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in Subsection R315-264-1063(b), except as provided in Subsections R315-264-1052(d), (e), and (f).

(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(b)(1) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(2) If there are indications of liquids dripping from the

pump seal, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section R315-264-1059.

(2) A first attempt at repair, e.g., tightening the packing gland, shall be made no later than 5 calendar days after each leak is detected.

(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of Subsection R315-264-1052(a), provided the following requirements are met:

(1) Each dual mechanical seal system shall be:

(i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure, or

(ii) Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of Section R315-264-1060, or

(iii) Equipped with a system that purges the barrier fluid into a hazardous waste stream with no detectable emissions to the atmosphere.

(2) The barrier fluid system shall not be a hazardous waste with organic concentrations 10 percent or greater by weight.

(3) Each barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each pump shall be checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

(5)(i) Each sensor as described in Subsection R315-264-1052(d)(3) shall be checked daily or be equipped with an audible alarm that shall be checked monthly to ensure that it is functioning properly.

(ii) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(6)(i) If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in Subsection R315-264-1052(d)(5)(ii), a leak is detected.

(ii) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section R315-264-1059.

(iii) A first attempt at repair, e.g., relapping the seal, shall be made no later than 5 calendar days after each leak is detected.

(e) Any pump that is designated, as described in Subsection R315-264-1064(g)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Subsections R315-264-1052(a), (c), and (d) if the pump meets the following requirements:

(1) Shall have no externally actuated shaft penetrating the pump housing.

(2) Shall operate with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in Subsection R315-264-1063(c).

(3) Shall be tested for compliance with Subsection R315-264-1052(e)(2) initially upon designation, annually, and at other times as requested by the Director.

(f) If any pump is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of Section R315-264-1060, it is exempt from the requirements of Subsections R315-264-1052(a) through (e).

R315-264-1053. Standards: Compressors.

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of

total organic emissions to the atmosphere, except as provided in Subsections R315-264-1053(h) and (i).

(b) Each compressor seal system as required in Subsection R315-264-1053(a) shall be:

(1) Operated with the barrier fluid at a pressure that is at all times greater than the compressor stuffing box pressure, or

(2) Equipped with a barrier fluid system that is connected by a closed-vent system to a control device that complies with the requirements of Section R315-264-1060, or

(3) Equipped with a system that purges the barrier fluid into a hazardous waste stream with no detectable emissions to atmosphere.

(c) The barrier fluid shall not be a hazardous waste with organic concentrations 10 percent or greater by weight.

(d) Each barrier fluid system as described in Subsections R315-264-1053(a) through (c) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e)(1) Each sensor as required in Subsection R315-264-1053(d) shall be checked daily or shall be equipped with an audible alarm that shall be checked monthly to ensure that it is functioning properly unless the compressor is located within the boundary of an unmanned plant site, in which case the sensor shall be checked daily.

(2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under Subsection R315-264-1053(e)(2), a leak is detected.

(g)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section R315-264-1059.

(2) A first attempt at repair, e.g., tightening the packing gland, shall be made no later than 5 calendar days after each leak is detected.

(h) A compressor is exempt from the requirements of Subsections R315-264-1053(a) and (b) if it is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal to a control device that complies with the requirements of Section R315-264-1060, except as provided in Subsection R315-264-1053(i).

(i) Any compressor that is designated, as described in Subsection R315-264-1064(g)(2), for no detectable emissions as indicated by an instrument reading of less than 500 ppm above background is exempt from the requirements of Subsections R315-264-1053(a) through (h) if the compressor:

(1) Is determined to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Subsection R315-264-1063(c).

(2) Is tested for compliance with Subsection R315-264-1053(i)(1) initially upon designation, annually, and at other times as requested by the Director.

R315-264-1054. Standards: Pressure Relief Devices in Gas/Vapor Service.

(a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Subsection R315-264-1063(c).

(b)(1) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in Section R315-264-1059.

(2) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Subsection R315-264-1063(c).

(c) Any pressure relief device that is equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in Section R315-264-264-1060 is exempt from the requirements of Subsection R315-264-1054(a) and (b).

R315-264-1055. Standards: Sampling Connection Systems.

(a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system. This system shall collect the sample purge for return to the process or for routing to the appropriate treatment system. Gases displaced during filling of the sample container are not required to be collected or captured.

(b) Each closed-purge, closed-loop, or closed-vent system as required in Subsection R315-264-1055(a) shall meet one of the following requirements:

- (1) Return the purged process fluid directly to the process line;
- (2) Collect and recycle the purged process fluid; or
- (3) Be designed and operated to capture and transport all the purged process fluid to a waste management unit that complies with the applicable requirements of Sections R315-264-1084 through 1086 or a control device that complies with the requirements of Section R315-264-1060.

(c) In-situ sampling systems and sampling systems without purges are exempt from the requirements of Subsections R315-264-1055(a) and (b).

R315-264-1056. Standards: Open-Ended Valves or Lines.

(a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve.

(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring hazardous waste stream flow through the open-ended valve or line.

(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the hazardous waste stream end is closed before the second valve is closed.

(c) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with Subsection R315-264-1056(a) at all other times.

R315-264-1057. Standards: Valves in Gas/Vapor Service or in Light Liquid Service.

(a) Each valve in gas/vapor or light liquid service shall be monitored monthly to detect leaks by the methods specified in Subsection R315-264-1063(b) and shall comply with Subsections R315-264-1057(b) through (e), except as provided in Subsections R315-264-1057(f), (g), and (h), and Sections R315-264-1061 and 1062.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c)(1) Any valve for which a leak is not detected for two successive months may be monitored the first month of every succeeding quarter, beginning with the next quarter, until a leak is detected.

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for two successive months.

(d)(1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in Section R315-264-1059.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

- (1) Tightening of bonnet bolts.
- (2) Replacement of bonnet bolts.
- (3) Tightening of packing gland nuts.
- (4) Injection of lubricant into lubricated packing.

(f) Any valve that is designated, as described in Subsection R315-264-1064(g)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Subsection R315-264-1057(a) if the valve:

- (1) Has no external actuating mechanism in contact with the hazardous waste stream.
- (2) Is operated with emissions less than 500 ppm above background as determined by the method specified in Subsection R315-264-1063(c).
- (3) Is tested for compliance with Subsection R315-264-1057(f)(2) initially upon designation, annually, and at other times as requested by the Director.

(g) Any valve that is designated, as described in Subsection R315-264-1064(h)(1), as an unsafe-to-monitor valve is exempt from the requirements of Subsection R315-264-1057(a) if:

(1) The owner or operator of the valve determines that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with Subsection R315-264-1057(a).

(2) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

(h) Any valve that is designated, as described in Subsection R315-264-1064(h)(2), as a difficult-to-monitor valve is exempt from the requirements of Subsection R315-264-1057(a) if:

(1) The owner or operator of the valve determines that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

(2) The hazardous waste management unit within which the valve is located was in operation before June 21, 1990.

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

R315-264-1058. Standards: Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Flanges and Other Connectors.

(a) Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors shall be monitored within 5 days by the method specified in Subsection R315-264-1063(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section R315-264-1059.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) First attempts at repair include, but are not limited to, the best practices described under Subsection R315-264-1057(e).

(e) Any connector that is inaccessible or is ceramic or ceramic-lined, e.g., porcelain, glass, or glass-lined, is exempt from the monitoring requirements of Subsection R315-264-1058(a) and from the recordkeeping requirements of Section R315-264-1064.

R315-264-1059. Standards: Delay of Repair.

(a) Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a hazardous waste management unit shutdown. In such a case, repair of this equipment shall occur before the end of the next hazardous waste management unit shutdown.

(b) Delay of repair of equipment for which leaks have been detected will be allowed for equipment that is isolated from the hazardous waste management unit and that does not continue to contain or contact hazardous waste with organic concentrations at least 10 percent by weight.

(c) Delay of repair for valves will be allowed if:

(1) The owner or operator determines that emissions of purged material resulting from immediate repair are greater than the emissions likely to result from delay of repair.

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with Section R315-264-1060.

(d) Delay of repair for pumps will be allowed if:

(1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system.

(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(e) Delay of repair beyond a hazardous waste management unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the hazardous waste management unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next hazardous waste management unit shutdown will not be allowed unless the next hazardous waste management unit shutdown occurs sooner than 6 months after the first hazardous waste management unit shutdown.

R315-264-1060. Standards: Closed-Vent Systems and Control Devices.

(a) Owners and operators of closed-vent systems and control devices subject to Sections R315-264-1050 through 1065 shall comply with the provisions of Section R315-264-1033.

(b)(1) The owner or operator of an existing facility who cannot install a closed-vent system and control device to comply with the provisions of Sections R315-264-1050 through 1065 on the effective date that the facility becomes subject to the provisions of Sections R315-264-1050 through 1065 shall prepare an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The controls shall be installed as soon as possible, but the implementation schedule may allow up to 30 months after the effective date that the facility becomes subject to Sections R315-264-1050 through 1065 for installation and startup.

(2) Any unit that begins operation after December 21, 1990, and is subject to the provisions of Sections R315-264-1050 through 1065 when operation begins, shall comply with the rules immediately, i.e., shall have control devices installed and operating on startup of the affected unit; the 30-month implementation schedule does not apply.

(3) The owner or operator of any facility in existence on the effective date of a statutory or regulatory amendment that renders the facility subject to Sections R315-264-1050 through 1065 shall comply with all requirements of Sections R315-264-1050 through 1065 as soon as practicable but no later than 30 months after the amendment's effective date. When control equipment required by Sections R315-264-1050 through 1065 cannot be installed and begin operation by the effective date of the amendment, the facility owner or operator shall prepare an implementation schedule that includes the following information: Specific calendar dates for award or contracts or

issuance of purchase orders for the control equipment, initiation of on-site installation of the control equipment, completion of the control equipment installation, and performance of any testing to demonstrate that the installed equipment meets the applicable standards of Sections R315-264-1050 through 1065. The owner or operator shall enter the implementation schedule in the operating record or in a permanent, readily available file located at the facility.

(4) Owners and operators of facilities and units that become newly subject to the requirements of Sections R315-264-1050 through 1065 after December 8, 1997, due to an action other than those described in Subsection R315-264-1060(b)(3) shall comply with all applicable requirements immediately, i.e., shall have control devices installed and operating on the date the facility or unit becomes subject to Sections R315-264-1050 through 1065; the 30-month implementation schedule does not apply.

R315-264-1061. Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Percentage of Valves Allowed to Leak.

(a) An owner or operator subject to the requirements of Section R315-264-1057 may elect to have all valves within a hazardous waste management unit comply with an alternative standard that allows no greater than 2 percent of the valves to leak.

(b) The following requirements shall be met if an owner or operator decides to comply with the alternative standard of allowing 2 percent of valves to leak:

(1) A performance test as specified in Section R315-264-1061(c) shall be conducted initially upon designation, annually, and at other times requested by the Director.

(2) If a valve leak is detected, it shall be repaired in accordance with Subsections R315-264-1057(d) and (e).

(c) Performance tests shall be conducted in the following manner:

(1) All valves subject to the requirements in Section R315-264-1057 within the hazardous waste management unit shall be monitored within 1 week by the methods specified in Subsection R315-264-1063(b).

(2) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(3) The leak percentage shall be determined by dividing the number of valves subject to the requirements in Section R315-264-1057 for which leaks are detected by the total number of valves subject to the requirements in Section R315-264-1057 within the hazardous waste management unit.

R315-264-1062. Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Skip Period Leak Detection and Repair.

(a) An owner or operator subject to the requirements of Section R315-264-1057 may elect for all valves within a hazardous waste management unit to comply with one of the alternative work practices specified in Subsections R315-264-1062(b)(2) and (3).

(b)(1) An owner or operator shall comply with the requirements for valves, as described in Section R315-264-1057, except as described in Subsections R315-264-1062(b)(2) and (b)(3).

(2) After two consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2 percent, an owner or operator may begin to skip one of the quarterly leak detection periods, i.e., monitor for leaks once every six months, for the valves subject to the requirements in Section R315-264-1057.

(3) After five consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2 percent, an owner or operator may begin to skip three of the

quarterly leak detection periods, i.e., monitor for leaks once every year, for the valves subject to the requirements in Section R315-264-1057.

(4) If the percentage of valves leaking is greater than 2 percent, the owner or operator shall monitor monthly in compliance with the requirements in Section R315-264-1057, but may again elect to use Section R315-264-1062 after meeting the requirements of Section R315-264-1057(c)(1).

R315-264-1063. Test Methods and Procedures.

(a) Each owner or operator subject to the provisions of Rule R315-264 shall comply with the test methods and procedures requirements provided in Section R315-264-1063.

(b) Leak detection monitoring, as required in Sections R315-264-1052 through 1062, shall comply with the following requirements:

(1) Monitoring shall comply with Reference Method 21 in 40 CFR part 60.

(2) The detection instrument shall meet the performance criteria of Reference Method 21.

(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21.

(4) Calibration gases shall be:

(i) Zero air, less than 10 ppm of hydrocarbon in air.

(ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.

(5) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

(c) When equipment is tested for compliance with no detectable emissions, as required in Subsections R315-264-1052(e), 1053(i), 1054, and 1057(f), the test shall comply with the following requirements:

(1) The requirements of Subsections R315-264-1063(b)(1) through (4) shall apply.

(2) The background level shall be determined as set forth in Reference Method 21.

(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(d) In accordance with the waste analysis plan required by Subsection R315-264-13(b), an owner or operator of a facility shall determine, for each piece of equipment, whether the equipment contains or contacts a hazardous waste with organic concentration that equals or exceeds 10 percent by weight using the following:

(1) Methods described in ASTM Methods D 2267-88, E 169-87, E 168-88, E 260-85, incorporated by reference under Section R315-260-11);

(2) Method 9060A, incorporated by reference under Section R315-260-11, of "Test Methods for Evaluating Solid Waste," EPA Publication SW-846, for computing total organic concentration of the sample, or analyzed for its individual organic constituents; or

(3) Application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced. Documentation of a waste determination by knowledge is required. Examples of documentation that shall be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the waste is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct measurement to have a total organic content less than 10

percent, or prior speciation analysis results on the same waste stream where it can also be documented that no process changes have occurred since that analysis that could affect the waste total organic concentration.

(e) If an owner or operator determines that a piece of equipment contains or contacts a hazardous waste with organic concentrations at least 10 percent by weight, the determination can be revised only after following the procedures in Subsections R315-264-1063(d)(1) or (d)(2).

(f) When an owner or operator and the Director do not agree on whether a piece of equipment contains or contacts a hazardous waste with organic concentrations at least 10 percent by weight, the procedures in Subsections R315-264-1063(d)(1) or (d)(2) can be used to resolve the dispute.

(g) Samples used in determining the percent organic content shall be representative of the highest total organic content hazardous waste that is expected to be contained in or contact the equipment.

(h) To determine if pumps or valves are in light liquid service, the vapor pressures of constituents may be obtained from standard reference texts or may be determined by ASTM D-2879-86, incorporated by reference under Section R315-260-11.

(i) Performance tests to determine if a control device achieves 95 weight percent organic emission reduction shall comply with the procedures of Sections R315-264-1034(c)(1) through (c)(4).

R315-264-1064. Recordkeeping Requirements.

(a)(1) Each owner or operator subject to the provisions of Sections R315-264-1050 through 1065 shall comply with the recordkeeping requirements of Section R315-264-1064.

(2) An owner or operator of more than one hazardous waste management unit subject to the provisions of Sections R315-264-1050 through 1065 may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.

(b) Owners and operators shall record the following information in the facility operating record:

(1) For each piece of equipment to which Sections R315-264-1050 through 1065 apply:

(i) Equipment identification number and hazardous waste management unit identification.

(ii) Approximate locations within the facility, e.g., identify the hazardous waste management unit on a facility plot plan.

(iii) Type of equipment, e.g., a pump or pipeline valve.

(iv) Percent-by-weight total organics in the hazardous waste stream at the equipment.

(v) Hazardous waste state at the equipment, e.g., gas/vapor or liquid.

(vi) Method of compliance with the standard, e.g., "monthly leak detection and repair" or "equipped with dual mechanical seals."

(2) For facilities that comply with the provisions of Subsection R315-264-1033(a)(2), an implementation schedule as specified in Subsection R315-264-1033(a)(2).

(3) Where an owner or operator chooses to use test data to demonstrate the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan as specified in Subsection R315-264-1035(b)(3).

(4) Documentation of compliance with Section R315-264-1060, including the detailed design documentation or performance test results specified in Subsection R315-264-1035(b)(4).

(c) When each leak is detected as specified in Sections R315-264-1052, 1053, 1057, and 1058, the following

requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, the date evidence of a potential leak was found in accordance with Subsection R315-264-1058(a), and the date the leak was detected, shall be attached to the leaking equipment.

(2) The identification on equipment, except on a valve, may be removed after it has been repaired.

(3) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in Subsection R315-264-1057(c) and no leak has been detected during those 2 months.

(d) When each leak is detected as specified in Subsections R315-264-1052, 1053, 1057, and 1058, the following information shall be recorded in an inspection log and shall be kept in the facility operating record:

(1) The instrument and operator identification numbers and the equipment identification number.

(2) The date evidence of a potential leak was found in accordance with Subsection R315-264-1058(a).

(3) The date the leak was detected and the dates of each attempt to repair the leak.

(4) Repair methods applied in each attempt to repair the leak.

(5) "Above 10,000" if the maximum instrument reading measured by the methods specified in Subsection R315-264-1063(b) after each repair attempt is equal to or greater than 10,000 ppm.

(6) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(7) Documentation supporting the delay of repair of a valve in compliance with Subsection R315-264-1059(c).

(8) The signature of the owner or operator, or designate, whose decision it was that repair could not be effected without a hazardous waste management unit shutdown.

(9) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days.

(10) The date of successful repair of the leak.

(e) Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of Section R315-264-1060 shall be recorded and kept up-to-date in the facility operating record as specified in Subsection R315-264-1035(c). Design documentation is specified in Subsection R315-264-1035(c)(1) and (c)(2) and monitoring, operating, and inspection information in Subsection R315-264-1035(c)(3) through (c)(8).

(f) For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the Director shall specify the appropriate recordkeeping requirements.

(g) The following information pertaining to all equipment subject to the requirements in Sections R315-264-1052 through 1060 shall be recorded in a log that is kept in the facility operating record:

(1) A list of identification numbers for equipment, except welded fittings, subject to the requirements of Sections R315-264-1050 through 1065.

(2)(i) A list of identification numbers for equipment that the owner or operator elects to designate for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, under the provisions of Subsections R315-264-1052(e), 1053(i), and 1057(f).

(ii) The designation of this equipment as subject to the requirements of Subsections R315-264-1052(e), 1053(i), or 1057(f) shall be signed by the owner or operator.

(3) A list of equipment identification numbers for pressure relief devices required to comply with Subsection R315-264-1054(a).

(4)(i) The dates of each compliance test required in Subsections R315-264-1052(e), 1053(i), 1054, and 1057(f).

(ii) The background level measured during each compliance test.

(iii) The maximum instrument reading measured at the equipment during each compliance test.

(5) A list of identification numbers for equipment in vacuum service.

(6) Identification, either by list or location, area or group, of equipment that contains or contacts hazardous waste with an organic concentration of at least 10 percent by weight for less than 300 hours per calendar year.

(h) The following information pertaining to all valves subject to the requirements of Subsections R315-264-1057(g) and (h) shall be recorded in a log that is kept in the facility operating record:

(1) A list of identification numbers for valves that are designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe to monitor, and the plan for monitoring each valve.

(2) A list of identification numbers for valves that are designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the planned schedule for monitoring each valve.

(i) The following information shall be recorded in the facility operating record for valves complying with Section R315-264-1062:

(1) A schedule of monitoring.

(2) The percent of valves found leaking during each monitoring period.

(j) The following information shall be recorded in a log that is kept in the facility operating record:

(1) Criteria required in Subsections R315-264-1052(d)(5)(ii) and 1053(e)(2) and an explanation of the design criteria.

(2) Any changes to these criteria and the reasons for the changes.

(k) The following information shall be recorded in a log that is kept in the facility operating record for use in determining exemptions as provided in the applicability section of Sections R315-264-1050 through 1065 and other specific sections of Rule R315-264:

(1) An analysis determining the design capacity of the hazardous waste management unit.

(2) A statement listing the hazardous waste influent to and effluent from each hazardous waste management unit subject to the requirements in Subsections R315-264-1052 through 1060 and an analysis determining whether these hazardous wastes are heavy liquids.

(3) An up-to-date analysis and the supporting information and data used to determine whether or not equipment is subject to the requirements in Subsections R315-264-1052 through 1060. The record shall include supporting documentation as required by Subsection R315-264-1063(d)(3) when application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced is used. If the owner or operator takes any action, e.g., changing the process that produced the waste, that could result in an increase in the total organic content of the waste contained in or contacted by equipment determined not to be subject to the requirements in Sections R315-264-1052 through 1060, then a new determination is required.

(l) Records of the equipment leak information required by Subsection R315-264-1064(d) and the operating information required by Subsection R315-264-1064(e) need be kept only 3 years.

(m) The owner or operator of a facility with equipment that is subject to Sections R315-264-1050 through 1065 and to regulations at 40 CFR part 60, part 61, or part 63 may elect to

determine compliance with Sections R315-264-1050 through 1065 either by documentation pursuant to Section R315-264-1064, or by documentation of compliance with the regulations at 40 CFR part 60, part 61, or part 63 pursuant to the relevant provisions of the regulations at 40 CFR part 60, part 61, or part 63. The documentation of compliance under regulations at 40 CFR part 60, part 61, or part 63 shall be kept with or made readily available with the facility operating record.

R315-264-1065. Reporting Requirements.

(a) A semiannual report shall be submitted by owners and operators subject to the requirements of Sections R315-264-1050 through 1065 to the Director by dates specified by the Director. The report shall include the following information:

(1) The Environmental Protection Agency identification number, name, and address of the facility.

(2) For each month during the semiannual reporting period:

(i) The equipment identification number of each valve for which a leak was not repaired as required in Subsection R315-264-1057(d).

(ii) The equipment identification number of each pump for which a leak was not repaired as required in Subsections R315-264-1052(c) and (d)(6).

(iii) The equipment identification number of each compressor for which a leak was not repaired as required in Subsection R315-264-1053(g).

(3) Dates of hazardous waste management unit shutdowns that occurred within the semiannual reporting period.

(4) For each month during the semiannual reporting period, dates when the control device installed as required by Sections R315-264-1052, 1053, 1054, or 1055 exceeded or operated outside of the design specifications as defined in Subsection R315-264-1064(e) and as indicated by the control device monitoring required by Section R315-264-1060 and was not corrected within 24 hours, the duration and cause of each exceedance, and any corrective measures taken.

(b) If, during the semiannual reporting period, leaks from valves, pumps, and compressors are repaired as required in Subsections R315-264-1057(d), 1052(c) and (d)(6), and 1053(g), respectively, and the control device does not exceed or operate outside of the design specifications as defined in Subsection R315-264-1064(e) for more than 24 hours, a report to the Director is not required.

R315-264-1080. Air Emission Standards for Tanks, Surface Impoundments, and Containers -- Applicability.

(a) The requirements of Sections R315-264-1080 through 1090 apply to owners and operators of all facilities that treat, store, or dispose of hazardous waste in tanks, surface impoundments, or containers subject to either Sections R315-264-170 through 179, 190 through 200, or 220 through 232 except as Section R315-264-1 and Subsection R315-264-1080(b) provide otherwise.

(b) The requirements of Sections R315-264-1080 through 1090 do not apply to the following waste management units at the facility:

(1) A waste management unit that holds hazardous waste placed in the unit before December 6, 1996, and in which no hazardous waste is added to the unit on or after December 6, 1996.

(2) A container that has a design capacity less than or equal to 0.1 cubic meter.

(3) A tank in which an owner or operator has stopped adding hazardous waste and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan.

(4) A surface impoundment in which an owner or operator has stopped adding hazardous waste, except to implement an

approved closure plan, and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan.

(5) A waste management unit that is used solely for on-site treatment or storage of hazardous waste that is placed in the unit as a result of implementing remedial activities required under the corrective action authorities of RCRA sections 3004(u), 3004(v), or 3008(h); CERCLA authorities; or similar Federal or Utah authorities.

(6) A hazardous waste management unit that is used solely for the management of radioactive mixed waste in accordance with all applicable regulations under the authority of the Atomic Energy Act and the Nuclear Waste Policy Act.

(7) A hazardous waste management unit that the owner or operator certifies is equipped with and operating air emission controls in accordance with the requirements of an applicable regulation codified under the Utah Air Conservation Act. For the purpose of complying with Subsection R315-264-1080(b), a tank for which the air emission control includes an enclosure, as opposed to a cover, shall be in compliance with the enclosure and control device requirements of Subsection R315-264-1084(i), except as provided in Subsection R315-264-1082(c)(5).

(8) A tank that has a process vent as defined in Section R315-264-1031.

(c) For the owner and operator of a facility subject to Sections R315-264-1080 through 1090 who received a final permit under RCRA section 3005 prior to December 6, 1996, the requirements of Sections R315-264-1080 through 1090 shall be incorporated into the permit when the permit is reissued in accordance with the requirements of Section R315-124-15 or reviewed in accordance with the requirements of Subsection R315-270-50(d). Until such date when the permit is reissued in accordance with the requirements of Section R315-124-15 or reviewed in accordance with the requirements of Subsection R315-270-50(d), the owner and operator are subject to the requirements of 40 CFR 265.1080 through 1090, which are adopted by reference.

(d) The requirements of Sections R315-264-1080 through 1090, except for the recordkeeping requirements specified in Subsection R315-264-1089(i), are administratively stayed for a tank or a container used for the management of hazardous waste generated by organic peroxide manufacturing and its associated laboratory operations when the owner or operator of the unit meets all of the following conditions:

(1) The owner or operator identifies that the tank or container receives hazardous waste generated by an organic peroxide manufacturing process producing more than one functional family of organic peroxides or multiple organic peroxides within one functional family, that one or more of these organic peroxides could potentially undergo self-accelerating thermal decomposition at or below ambient temperatures, and that organic peroxides are the predominant products manufactured by the process. For the purpose of meeting the conditions of Section R315-264-1080, "organic peroxide" means an organic compound that contains the bivalent structure and which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms has been replaced by an organic radical.

(2) The owner or operator prepares documentation, in accordance with the requirements of Subsection R315-264-1089(i), explaining why an undue safety hazard would be created if air emission controls specified in Sections R315-264-1084 through 1087 are installed and operated on the tanks and containers used at the facility to manage the hazardous waste generated by the organic peroxide manufacturing process or processes meeting the conditions of Subsection R315-264-1080(d)(1).

(3) The owner or operator notifies the Director in writing that hazardous waste generated by an organic peroxide

manufacturing process or processes meeting the conditions of Subsection R315-264-1080(d)(1) are managed at the facility in tanks or containers meeting the conditions of Subsection R315-264-1080(d)(2). The notification shall state the name and address of the facility, and be signed and dated by an authorized representative of the facility owner or operator.

R315-264-1081. Definitions.

As used in Sections R315-264-1080 through 1090, all terms shall have the meaning given to them in 40 CFR 265.1081, which is adopted by reference; RCRA; and Rules R315-260 through 266.

R315-264-1082. Standards: General.

(a) Section R315-264-1082 applies to the management of hazardous waste in tanks, surface impoundments, and containers subject to Sections R315-264-1080 through 1090.

(b) The owner or operator shall control air pollutant emissions from each hazardous waste management unit in accordance with standards specified in Sections R315-264-1084 through 1087, as applicable to the hazardous waste management unit, except as provided for in Subsection R315-264-1082(c).

(c) A tank, surface impoundment, or container is exempt from standards specified in Sections R315-264-1084 through 1087, as applicable, provided that the waste management unit is one of the following:

(1) A tank, surface impoundment, or container for which all hazardous waste entering the unit has an average VO concentration at the point of waste origination of less than 500 parts per million by weight (ppmw). The average VO concentration shall be determined using the procedures specified in Subsection R315-264-1083(a). The owner or operator shall review and update, as necessary, this determination at least once every 12 months following the date of the initial determination for the hazardous waste streams entering the unit.

(2) A tank, surface impoundment, or container for which the organic content of all the hazardous waste entering the waste management unit has been reduced by an organic destruction or removal process that achieves any one of the following conditions:

(i) A process that removes or destroys the organics contained in the hazardous waste to a level such that the average VO concentration of the hazardous waste at the point of waste treatment is less than the exit concentration limit (Ct) established for the process. The average VO concentration of the hazardous waste at the point of waste treatment and the exit concentration limit for the process shall be determined using the procedures specified in Subsection R315-264-1083(b).

(ii) A process that removes or destroys the organics contained in the hazardous waste to a level such that the organic reduction efficiency (R) for the process is equal to or greater than 95 percent, and the average VO concentration of the hazardous waste at the point of waste treatment is less than 100 ppmw. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedures specified in Subsection R315-264-1083(b).

(iii) A process that removes or destroys the organics contained in the hazardous waste to a level such that the actual organic mass removal rate (MR) for the process is equal to or greater than the required organic mass removal rate (RMR) established for the process. The required organic mass removal rate and the actual organic mass removal rate for the process shall be determined using the procedures specified in Subsection R315-264-1083(b).

(iv) A biological process that destroys or degrades the organics contained in the hazardous waste, such that either of the following conditions is met:

(A) The organic reduction efficiency (R) for the process is

equal to or greater than 95 percent, and the organic biodegradation efficiency (R_{bio}) for the process is equal to or greater than 95 percent. The organic reduction efficiency and the organic biodegradation efficiency for the process shall be determined using the procedures specified in Subsection R315-264-1083(b).

(B) The total actual organic mass biodegradation rate (MR_{bio}) for all hazardous waste treated by the process is equal to or greater than the required organic mass removal rate (RMR). The required organic mass removal rate and the actual organic mass biodegradation rate for the process shall be determined using the procedures specified in Subsection R315-264-1083(b).

(v) A process that removes or destroys the organics contained in the hazardous waste and meets all of the following conditions:

(A) From the point of waste origination through the point where the hazardous waste enters the treatment process, the hazardous waste is managed continuously in waste management units which use air emission controls in accordance with the standards specified in Sections R315-264-1084 through 1087, as applicable to the waste management unit.

(B) From the point of waste origination through the point where the hazardous waste enters the treatment process, any transfer of the hazardous waste is accomplished through continuous hard-piping or other closed system transfer that does not allow exposure of the waste to the atmosphere. The Director considers a drain system that meets the requirements of Subsection R307-214-2(29), which incorporates 40 CFR part 63, subpart RR-National Emission Standards for Individual Drain Systems to be a closed system.

(C) The average VO concentration of the hazardous waste at the point of waste treatment is less than the lowest average VO concentration at the point of waste origination determined for each of the individual waste streams entering the process or 500 ppmw, whichever value is lower. The average VO concentration of each individual waste stream at the point of waste origination shall be determined using the procedures specified in Subsection R315-264-1083(a). The average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedures specified in Subsection R315-264-1083(b).

(vi) A process that removes or destroys the organics contained in the hazardous waste to a level such that the organic reduction efficiency (R) for the process is equal to or greater than 95 percent and the owner or operator certifies that the average VO concentration at the point of waste origination for each of the individual waste streams entering the process is less than 10,000 ppmw. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste origination shall be determined using the procedures specified in Subsections R315-264-1083(b) and 1083(a), respectively.

(vii) A hazardous waste incinerator for which the owner or operator has either:

(A) Been issued a final permit under Rule R315-270 which implements the requirements of Sections R315-264-340 through 351; or

(B) Has designed and operates the incinerator in accordance with the interim status requirements of 40 CFR 265.340 through 352, which are adopted by reference.

(viii) A boiler or industrial furnace for which the owner or operator has either:

(A) Been issued a final permit under Rule R315-270 which implements the requirements of Sections R315-266-100 through 112, or

(B) Has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of Sections R315-266-100 through 112.

(ix) For the purpose of determining the performance of an organic destruction or removal process in accordance with the conditions in each of Subsections R315-264-1082(c)(2)(i) through (c)(2)(vi), the owner or operator shall account for VO concentrations determined to be below the limit of detection of the analytical method by using the following VO concentration:

(A) If Method 25D in 40 CFR part 60, appendix A is used for the analysis, one-half the blank value determined in the method at section 4.4 of Method 25D in 40 CFR part 60, appendix A, or a value of 25 ppmw, whichever is less.

(B) If any other analytical method is used, one-half the sum of the limits of detection established for each organic constituent in the waste that has a Henry's law constant value at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X), which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/m³, at 25 degrees Celsius.

(3) A tank or surface impoundment used for biological treatment of hazardous waste in accordance with the requirements of Subsection R315-264-1082(c)(2)(iv).

(4) A tank, surface impoundment, or container for which all hazardous waste placed in the unit either:

(i) Meets the numerical concentration limits for organic hazardous constituents, applicable to the hazardous waste, as specified in Section R315-268-40-Land Disposal Restrictions under Table "Treatment Standards for Hazardous Waste;" or

(ii) The organic hazardous constituents in the waste have been treated by the treatment technology established by the Board for the waste in Subsection R315-268-42(a), or have been removed or destroyed by an equivalent method of treatment approved by EPA pursuant to 40 CFR 268.42(b).

(5) A tank used for bulk feed of hazardous waste to a waste incinerator and all of the following conditions are met:

(i) The tank is located inside an enclosure vented to a control device that is designed and operated in accordance with all applicable requirements specified under Section R315-214-1, which incorporates 40 CFR part 61, subpart FF-National Emission Standards for Benzene Waste Operations for a facility at which the total annual benzene quantity from the facility waste is equal to or greater than 10 megagrams per year;

(ii) The enclosure and control device serving the tank were installed and began operation prior to November 25, 1996 and

(iii) The enclosure is designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T-Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical or electrical equipment; or to direct air flow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T-Criteria for and Verification of a Permanent or Temporary Total Enclosure" annually.

(d) The Director may at any time perform or request that the owner or operator perform a waste determination for a hazardous waste managed in a tank, surface impoundment, or container exempted from using air emission controls under the provisions of Section R315-264-1082 as follows:

(1) The waste determination for average VO concentration of a hazardous waste at the point of waste origination shall be performed using direct measurement in accordance with the applicable requirements of Subsection R315-264-1083(a). The waste determination for a hazardous waste at the point of waste treatment shall be performed in accordance with the applicable requirements of Subsection R315-264-1083(b).

(2) In performing a waste determination pursuant to Subsection R315-264-1082(d)(1), the sample preparation and analysis shall be conducted as follows:

(i) In accordance with the method used by the owner or

operator to perform the waste analysis, except in the case specified in Subsection R315-264-1082(d)(2)(ii).

(ii) If the Director determines that the method used by the owner or operator was not appropriate for the hazardous waste managed in the tank, surface impoundment, or container, then the Director may choose an appropriate method.

(3) In a case when the owner or operator is requested to perform the waste determination, the Director may elect to have an authorized representative observe the collection of the hazardous waste samples used for the analysis.

(4) In a case when the results of the waste determination performed or requested by the Director do not agree with the results of a waste determination performed by the owner or operator using knowledge of the waste, then the results of the waste determination performed in accordance with the requirements of Subsection R315-264-1082(d)(1) shall be used to establish compliance with the requirements of Sections R315-264-1080 through 1090.

(5) In a case when the owner or operator has used an averaging period greater than 1 hour for determining the average VO concentration of a hazardous waste at the point of waste origination, the Director may elect to establish compliance with Sections R315-264-1080 through 1090 by performing or requesting that the owner or operator perform a waste determination using direct measurement based on waste samples collected within a 1-hour period as follows:

(i) The average VO concentration of the hazardous waste at the point of waste origination shall be determined by direct measurement in accordance with the requirements of Subsection R315-264-1083(a).

(ii) Results of the waste determination performed or requested by the Director showing that the average VO concentration of the hazardous waste at the point of waste origination is equal to or greater than 500 ppmw shall constitute noncompliance with Sections R315-264-1080 through 1090 except in a case as provided for in Subsection R315-264-1082(d)(5)(iii).

(iii) For the case when the average VO concentration of the hazardous waste at the point of waste origination previously has been determined by the owner or operator using an averaging period greater than 1 hour to be less than 500 ppmw but because of normal operating process variations the VO concentration of the hazardous waste determined by direct measurement for any given 1-hour period may be equal to or greater than 500 ppmw, information that was used by the owner or operator to determine the average VO concentration of the hazardous waste, e.g., test results, measurements, calculations, and other documentation, and recorded in the facility records in accordance with the requirements of Subsections R315-264-1083(a) and Section R315-264-1089 shall be considered by the Director together with the results of the waste determination performed or requested by the Director in establishing compliance with Sections R315-264-1080 through 1090.

R315-264-1083. Waste Determination Procedures.

(a) Waste determination procedure to determine average volatile organic (VO) concentration of a hazardous waste at the point of waste origination.

(1) An owner or operator shall determine the average VO concentration at the point of waste origination for each hazardous waste placed in a waste management unit exempted under the provisions of Subsection R315-264-1082(c)(1) from using air emission controls in accordance with standards specified in Sections R315-264-1084 through 1087, as applicable to the waste management unit.

(i) An initial determination of the average VO concentration of the waste stream shall be made before the first time any portion of the material in the hazardous waste stream is placed in a waste management unit exempted under the

provisions of Subsection R315-264-1082(c)(1) from using air emission controls, and thereafter an initial determination of the average VO concentration of the waste stream shall be made for each averaging period that a hazardous waste is managed in the unit; and

(ii) Perform a new waste determination whenever changes to the source generating the waste stream are reasonably likely to cause the average VO concentration of the hazardous waste to increase to a level that is equal to or greater than the applicable VO concentration limits specified in Section R315-264-1082.

(2) For a waste determination that is required by Subsection R315-264-1083(a)(1), the average VO concentration of a hazardous waste at the point of waste origination shall be determined in accordance with the procedures specified in 40 CFR 265.1084(a)(2) through (a)(4), which are adopted by reference.

(b) Waste determination procedures for treated hazardous waste.

(1) An owner or operator shall perform the applicable waste determinations for each treated hazardous waste placed in waste management units exempted under the provisions of Subsections R315-264-1082(c)(2)(i) through (c)(2)(vi) from using air emission controls in accordance with standards specified in Sections R315-264-1084 through 1087, as applicable to the waste management unit.

(i) An initial determination of the average VO concentration of the waste stream shall be made before the first time any portion of the material in the treated waste stream is placed in the exempt waste management unit, and thereafter update the information used for the waste determination at least once every 12 months following the date of the initial waste determination; and

(ii) Perform a new waste determination whenever changes to the process generating or treating the waste stream are reasonably likely to cause the average VO concentration of the hazardous waste to increase to a level such that the applicable treatment conditions specified in Subsection R315-264-1082(c)(2) are not achieved.

(2) The waste determination for a treated hazardous waste shall be performed in accordance with the procedures specified in 40 CFR 265.1084(b)(2) through (b)(9), which are adopted by reference, as applicable to the treated hazardous waste.

(c) Procedure to determine the maximum organic vapor pressure of a hazardous waste in a tank.

(1) An owner or operator shall determine the maximum organic vapor pressure for each hazardous waste placed in a tank using Tank Level 1 controls in accordance with standards specified in Subsection R315-264-1084(c).

(2) The maximum organic vapor pressure of the hazardous waste may be determined in accordance with the procedures specified in 40 CFR 265.1084(c)(2) through (c)(4), which are adopted by reference.

(d) The procedure for determining no detectable organic emissions for the purpose of complying with Sections R315-264-1080 through 1090 shall be conducted in accordance with the procedures specified in 40 CFR 265.1084(d), which is adopted by reference.

R315-264-1084. Standards: Tanks.

(a) The provisions of Section R315-264-1084 apply to the control of air pollutant emissions from tanks for which Subsection R315-264-1082(b) references the use of Section R315-264-1084 for such air emission control.

(b) The owner or operator shall control air pollutant emissions from each tank subject to Section R315-264-1084 in accordance with the following requirements as applicable:

(1) For a tank that manages hazardous waste that meets all of the conditions specified in Subsections R315-264-

1084(b)(1)(i) through (b)(1)(iii), the owner or operator shall control air pollutant emissions from the tank in accordance with the Tank Level 1 controls specified in Subsection R315-264-1084(c) or the Tank Level 2 controls specified in Subsection R315-264-1084(d).

(i) The hazardous waste in the tank has a maximum organic vapor pressure which is less than the maximum organic vapor pressure limit for the tank's design capacity category as follows:

(A) For a tank design capacity equal to or greater than 151 cubic meters, the maximum organic vapor pressure limit for the tank is 5.2 kPa.

(B) For a tank design capacity equal to or greater than 75 cubic meters but less than 151 cubic meters, the maximum organic vapor pressure limit for the tank is 27.6 kPa.

(C) For a tank design capacity less than 75 cubic meters, the maximum organic vapor pressure limit for the tank is 76.6 kPa.

(ii) The hazardous waste in the tank is not heated by the owner or operator to a temperature that is greater than the temperature at which the maximum organic vapor pressure of the hazardous waste is determined for the purpose of complying with Subsection R315-264-1084(b)(1)(i).

(iii) The hazardous waste in the tank is not treated by the owner or operator using a waste stabilization process, as defined in 40 CFR 265.1081, which is adopted by reference.

(2) For a tank that manages hazardous waste that does not meet all of the conditions specified in Subsections R315-264-1084(b)(1)(i) through (b)(1)(iii), the owner or operator shall control air pollutant emissions from the tank by using Tank Level 2 controls in accordance with the requirements of Subsection R315-264-1084(d). Examples of tanks required to use Tank Level 2 controls include: A tank used for a waste stabilization process; and a tank for which the hazardous waste in the tank has a maximum organic vapor pressure that is equal to or greater than the maximum organic vapor pressure limit for the tank's design capacity category as specified in Subsection R315-264-1084(b)(1)(i).

(c) Owners and operators controlling air pollutant emissions from a tank using Tank Level 1 controls shall meet the requirements specified in Subsections R315-264-1084(c)(1) through (c)(4):

(1) The owner or operator shall determine the maximum organic vapor pressure for a hazardous waste to be managed in the tank using Tank Level 1 controls before the first time the hazardous waste is placed in the tank. The maximum organic vapor pressure shall be determined using the procedures specified in Subsection R315-264-1083(c). Thereafter, the owner or operator shall perform a new determination whenever changes to the hazardous waste managed in the tank could potentially cause the maximum organic vapor pressure to increase to a level that is equal to or greater than the maximum organic vapor pressure limit for the tank design capacity category specified in Subsection R315-264-1084(b)(1)(i), as applicable to the tank.

(2) The tank shall be equipped with a fixed roof designed to meet the following specifications:

(i) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the hazardous waste in the tank. The fixed roof may be a separate cover installed on the tank, e.g., a removable cover mounted on an open-top tank, or may be an integral part of the tank structural design, e.g., a horizontal cylindrical tank equipped with a hatch.

(ii) The fixed roof shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between roof section joints or between the interface of the roof edge and the tank wall.

(iii) Each opening in the fixed roof, and any manifold

system associated with the fixed roof, shall be either:

(A) Equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device; or

(B) Connected by a closed-vent system that is vented to a control device. The control device shall remove or destroy organics in the vent stream, and shall be operating whenever hazardous waste is managed in the tank, except as provided for in Subsection R315-264-1084(c)(2)(iii)(B)(I) and (II).

(I) During periods when it is necessary to provide access to the tank for performing the activities of Subsection R315-264-1084(c)(2)(iii)(B)(II), venting of the vapor headspace underneath the fixed roof to the control device is not required, opening of closure devices is allowed, and removal of the fixed roof is allowed. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, and resume operation of the control device.

(II) During periods of routine inspection, maintenance, or other activities needed for normal operations, and for removal of accumulated sludge or other residues from the bottom of the tank.

(iv) The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: Organic vapor permeability, the effects of any contact with the hazardous waste or its vapors managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

(3) Whenever a hazardous waste is in the tank, the fixed roof shall be installed with each closure device secured in the closed position except as follows:

(i) Opening of closure devices or removal of the fixed roof is allowed at the following times:

(A) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

(B) To remove accumulated sludge or other residues from the bottom of tank.

(ii) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the tank internal pressure in accordance with the tank design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the tank internal pressure is within the internal pressure operating range determined by the owner or operator based on the tank manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the tank internal pressure exceeds the internal pressure operating

range for the tank as a result of loading operations or diurnal ambient temperature fluctuations.

(iii) Opening of a safety device, as defined in 40 CFR 265.1081, which is adopted by reference, is allowed at any time conditions require doing so to avoid an unsafe condition.

(4) The owner or operator shall inspect the air emission control equipment in accordance with the following requirements.

(i) The fixed roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The owner or operator shall perform an initial inspection of the fixed roof and its closure devices on or before the date that the tank becomes subject to Section R315-264-1084. Thereafter, the owner or operator shall perform the inspections at least once every year except under the special conditions provided for in Subsection R315-264-1084(l).

(iii) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subsection R315-264-1084(k).

(iv) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Subsection R315-264-1089(b).

(d) Owners and operators controlling air pollutant emissions from a tank using Tank Level 2 controls shall use one of the following tanks:

(1) A fixed-roof tank equipped with an internal floating roof in accordance with the requirements specified in Subsection R315-264-1084(e);

(2) A tank equipped with an external floating roof in accordance with the requirements specified in Subsection R315-264-1084(f)

(3) A tank vented through a closed-vent system to a control device in accordance with the requirements specified in Subsection R315-264-1084(g);

(4) A pressure tank designed and operated in accordance with the requirements specified in Subsection R315-264-1084(h); or

(5) A tank located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device in accordance with the requirements specified in Subsection R315-264-1084(i).

(e) The owner or operator who controls air pollutant emissions from a tank using a fixed roof with an internal floating roof shall meet the requirements specified in Subsections R315-264-1084(e)(1) through (e)(3).

(1) The tank shall be equipped with a fixed roof and an internal floating roof in accordance with the following requirements:

(i) The internal floating roof shall be designed to float on the liquid surface except when the floating roof shall be supported by the leg supports.

(ii) The internal floating roof shall be equipped with a continuous seal between the wall of the tank and the floating roof edge that meets either of the following requirements:

(A) A single continuous seal that is either a liquid-mounted seal or a metallic shoe seal, as defined in 40 CFR 265.1081, which is adopted by reference; or

(B) Two continuous seals mounted one above the other. The lower seal may be a vapor-mounted seal.

(iii) The internal floating roof shall meet the following specifications:

(A) Each opening in a noncontact internal floating roof except for automatic bleeder vents, vacuum breaker vents, and

the rim space vents is to provide a projection below the liquid surface.

(B) Each opening in the internal floating roof shall be equipped with a gasketed cover or a gasketed lid except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains.

(C) Each penetration of the internal floating roof for the purpose of sampling shall have a slit fabric cover that covers at least 90 percent of the opening.

(D) Each automatic bleeder vent and rim space vent shall be gasketed.

(E) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(F) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(2) The owner or operator shall operate the tank in accordance with the following requirements:

(i) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be completed as soon as practical.

(ii) Automatic bleeder vents are to be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

(iii) Prior to filling the tank, each cover, access hatch, gauge float well or lid on any opening in the internal floating roof shall be bolted or fastened closed, i.e., no visible gaps. Rim space vents are to be set to open only when the internal floating roof is not floating or when the pressure beneath the rim exceeds the manufacturer's recommended setting.

(3) The owner or operator shall inspect the internal floating roof in accordance with the procedures specified as follows:

(i) The floating roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to: The internal floating roof is not floating on the surface of the liquid inside the tank; liquid has accumulated on top of the internal floating roof; any portion of the roof seals have detached from the roof rim; holes, tears, or other openings are visible in the seal fabric; the gaskets no longer close off the hazardous waste surface from the atmosphere; or the slotted membrane has more than 10 percent open area.

(ii) The owner or operator shall inspect the internal floating roof components as follows except as provided in Subsection R315-264-1084(e)(3)(iii):

(A) Visually inspect the internal floating roof components through openings on the fixed-roof, e.g., manholes and roof hatches, at least once every 12 months after initial fill, and

(B) Visually inspect the internal floating roof, primary seal, secondary seal, if one is in service, gaskets, slotted membranes, and sleeve seals, if any, each time the tank is emptied and degassed and at least every 10 years.

(iii) As an alternative to performing the inspections specified in Subsection R315-264-1084(e)(3)(ii) for an internal floating roof equipped with two continuous seals mounted one above the other, the owner or operator may visually inspect the internal floating roof, primary and secondary seals, gaskets, slotted membranes, and sleeve seals, if any, each time the tank is emptied and degassed and at least every 5 years.

(iv) Prior to each inspection required by Subsections R315-264-1084(e)(3)(ii) or (e)(3)(iii), the owner or operator shall notify the Director in advance of each inspection to provide the Director with the opportunity to have an observer present during the inspection. The owner or operator shall notify the Director of the date and location of the inspection as follows:

(A) Prior to each visual inspection of an internal floating

roof in a tank that has been emptied and degassed, written notification shall be prepared and sent by the owner or operator so that it is received by the Director at least 30 calendar days before refilling the tank except when an inspection is not planned as provided for in Subsection R315-264-1084(e)(3)(iv)(B).

(B) When a visual inspection is not planned and the owner or operator could not have known about the inspection 30 calendar days before refilling the tank, the owner or operator shall notify the Director as soon as possible, but no later than 7 calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the Director at least 7 calendar days before refilling the tank.

(v) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subsection R315-264-1084(k).

(vi) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Subsection R315-264-1089(b).

(4) Safety devices, as defined in 40 CFR 265.1081, which is adopted by reference, may be installed and operated as necessary on any tank complying with the requirements of Subsection R315-264-1084(e).

(f) The owner or operator who controls air pollutant emissions from a tank using an external floating roof shall meet the requirements specified in Subsections R315-264-1084(f)(1) through (f)(3).

(1) The owner or operator shall design the external floating roof in accordance with the following requirements:

(i) The external floating roof shall be designed to float on the liquid surface except when the floating roof shall be supported by the leg supports.

(ii) The floating roof shall be equipped with two continuous seals, one above the other, between the wall of the tank and the roof edge. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be a liquid-mounted seal or a metallic shoe seal, as defined in 40 CFR 265.1081, which is adopted by reference. The total area of the gaps between the tank wall and the primary seal shall not exceed 212 square centimeters per meter of tank diameter, and the width of any portion of these gaps shall not exceed 3.8 centimeters. If a metallic shoe seal is used for the primary seal, the metallic shoe seal shall be designed so that one end extends into the liquid in the tank and the other end extends a vertical distance of at least 61 centimeters above the liquid surface.

(B) The secondary seal shall be mounted above the primary seal and cover the annular space between the floating roof and the wall of the tank. The total area of the gaps between the tank wall and the secondary seal shall not exceed 21.2 square centimeters per meter of tank diameter, and the width of any portion of these gaps shall not exceed 1.3 centimeters.

(iii) The external floating roof shall meet the following specifications:

(A) Except for automatic bleeder vents, vacuum breaker vents, and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface.

(B) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid.

(C) Each access hatch and each gauge float well shall be equipped with a cover designed to be bolted or fastened when the cover is secured in the closed position.

(D) Each automatic bleeder vent and each rim space vent

shall be equipped with a gasket.

(E) Each roof drain that empties into the liquid managed in the tank shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(F) Each unslotted and slotted guide pole well shall be equipped with a gasketed sliding cover or a flexible fabric sleeve seal.

(G) Each unslotted guide pole shall be equipped with a gasketed cap on the end of the pole.

(H) Each slotted guide pole shall be equipped with a gasketed float or other device which closes off the liquid surface from the atmosphere.

(I) Each gauge hatch and each sample well shall be equipped with a gasketed cover.

(2) The owner or operator shall operate the tank in accordance with the following requirements:

(i) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be completed as soon as practical.

(ii) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof shall be secured and maintained in a closed position at all times except when the closure device shall be open for access.

(iii) Covers on each access hatch and each gauge float well shall be bolted or fastened when secured in the closed position.

(iv) Automatic bleeder vents shall be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

(v) Rim space vents shall be set to open only at those times that the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

(vi) The cap on the end of each unslotted guide pole shall be secured in the closed position at all times except when measuring the level or collecting samples of the liquid in the tank.

(vii) The cover on each gauge hatch or sample well shall be secured in the closed position at all times except when the hatch or well shall be opened for access.

(viii) Both the primary seal and the secondary seal shall completely cover the annular space between the external floating roof and the wall of the tank in a continuous fashion except during inspections.

(3) The owner or operator shall inspect the external floating roof in accordance with the procedures specified as follows:

(i) The owner or operator shall measure the external floating roof seal gaps in accordance with the following requirements:

(A) The owner or operator shall perform measurements of gaps between the tank wall and the primary seal within 60 calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every 5 years.

(B) The owner or operator shall perform measurements of gaps between the tank wall and the secondary seal within 60 calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every year.

(C) If a tank ceases to hold hazardous waste for a period of 1 year or more, subsequent introduction of hazardous waste into the tank shall be considered an initial operation for the purposes of Subsections R315-264-1084(f)(3)(i)(A) and (f)(3)(i)(B).

(D) The owner or operator shall determine the total surface area of gaps in the primary seal and in the secondary seal individually using the following procedure:

(1) The seal gap measurements shall be performed at one or more floating roof levels when the roof is floating off the roof

supports.

(2) Seal gaps, if any, shall be measured around the entire perimeter of the floating roof in each place where a 0.32-centimeter diameter uniform probe passes freely, without forcing or binding against the seal, between the seal and the wall of the tank and measure the circumferential distance of each such location.

(3) For a seal gap measured under Subsection R315-264-1084(f)(3), the gap surface area shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(4) The total gap area shall be calculated by adding the gap surface areas determined for each identified gap location for the primary seal and the secondary seal individually, and then dividing the sum for each seal type by the nominal diameter of the tank. These total gap areas for the primary seal and secondary seal are then compared to the respective standards for the seal type as specified in Subsection R315-264-1084(f)(1)(ii).

(E) In the event that the seal gap measurements do not conform to the specifications in Subsection R315-264-1084(f)(1)(ii), the owner or operator shall repair the defect in accordance with the requirements of Subsection R315-264-1084(k).

(F) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Subsection R315-264-1089(b).

(ii) The owner or operator shall visually inspect the external floating roof in accordance with the following requirements:

(A) The floating roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to: Holes, tears, or other openings in the rim seal or seal fabric of the floating roof; a rim seal detached from the floating roof; all or a portion of the floating roof deck being submerged below the surface of the liquid in the tank; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(B) The owner or operator shall perform an initial inspection of the external floating roof and its closure devices on or before the date that the tank becomes subject to Section R315-264-1084. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in Subsection R315-264-1084(l).

(C) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subsection R315-264-1084(k).

(D) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Subsection R315-264-1089(b).

(iii) Prior to each inspection required by Subsections R315-264-1084(f)(3)(i) or (f)(3)(ii), the owner or operator shall notify the Director in advance of each inspection to provide the Director with the opportunity to have an observer present during the inspection. The owner or operator shall notify the Director of the date and location of the inspection as follows:

(A) Prior to each inspection to measure external floating roof seal gaps as required under Subsection R315-264-1084(f)(3)(i), written notification shall be prepared and sent by the owner or operator so that it is received by the Director at least 30 calendar days before the date the measurements are scheduled to be performed.

(B) Prior to each visual inspection of an external floating roof in a tank that has been emptied and degassed, written notification shall be prepared and sent by the owner or operator so that it is received by the Director at least 30 calendar days

before refilling the tank except when an inspection is not planned as provided for in Subsection R315-264-1084(f)(3)(iii)(C).

(C) When a visual inspection is not planned and the owner or operator could not have known about the inspection 30 calendar days before refilling the tank, the owner or operator shall notify the Director as soon as possible, but no later than 7 calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the Director at least 7 calendar days before refilling the tank.

(4) Safety devices, as defined in 40 CFR 265.1081, which is adopted by reference, may be installed and operated as necessary on any tank complying with the requirements of Subsection R315-264-1084(f).

(g) The owner or operator who controls air pollutant emissions from a tank by venting the tank to a control device shall meet the requirements specified in Subsections R315-264-1084(g)(1) through (g)(3).

(1) The tank shall be covered by a fixed roof and vented directly through a closed-vent system to a control device in accordance with the following requirements:

(i) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the tank.

(ii) Each opening in the fixed roof not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace underneath the fixed roof is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the fixed roof is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions.

(iii) The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: Organic vapor permeability, the effects of any contact with the liquid and its vapor managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

(iv) The closed-vent system and control device shall be designed and operated in accordance with the requirements of Section R315-264-1087.

(2) Whenever a hazardous waste is in the tank, the fixed roof shall be installed with each closure device secured in the closed position and the vapor headspace underneath the fixed roof vented to the control device except as follows:

(i) Venting to the control device is not required, and opening of closure devices or removal of the fixed roof is allowed at the following times:

(A) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

(B) To remove accumulated sludge or other residues from the bottom of a tank.

(ii) Opening of a safety device, as defined in 40 CFR 265.1081, which is adopted by reference, is allowed at any time conditions require doing so to avoid an unsafe condition.

(3) The owner or operator shall inspect and monitor the air emission control equipment in accordance with the following procedures:

(i) The fixed roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The closed-vent system and control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in Section R315-264-1087.

(iii) The owner or operator shall perform an initial inspection of the air emission control equipment on or before the date that the tank becomes subject to Section R315-264-1084. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in Subsection R315-264-1084(l).

(iv) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subsection R315-264-1084(k).

(v) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Subsection R315-264-1089(b).

(h) The owner or operator who controls air pollutant emissions by using a pressure tank shall meet the following requirements.

(1) The tank shall be designed not to vent to the atmosphere as a result of compression of the vapor headspace in the tank during filling of the tank to its design capacity.

(2) All tank openings shall be equipped with closure devices designed to operate with no detectable organic emissions as determined using the procedure specified in Subsection R315-264-1083(d).

(3) Whenever a hazardous waste is in the tank, the tank shall be operated as a closed system that does not vent to the atmosphere except under either of the following conditions as specified in Subsections R315-264-1084(h)(3)(i) or (h)(3)(ii).

(i) At those times when opening of a safety device, as defined in 40 CFR 265.1081, which is adopted by reference, is required to avoid an unsafe condition.

(ii) At those times when purging of inerts from the tank is required and the purge stream is routed to a closed-vent system and control device designed and operated in accordance with the requirements of Section R315-264-1087.

(i) The owner or operator who controls air pollutant emissions by using an enclosure vented through a closed-vent system to an enclosed combustion control device shall meet the requirements specified in Subsections R315-264-1084(i)(1) through (i)(4).

(1) The tank shall be located inside an enclosure. The enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T-Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T-Criteria for and Verification of a

Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.

(2) The enclosure shall be vented through a closed-vent system to an enclosed combustion control device that is designed and operated in accordance with the standards for either a vapor incinerator, boiler, or process heater specified in Section R315-264-1087.

(3) Safety devices, as defined in 40 CFR 265.1081, which is adopted by reference, may be installed and operated as necessary on any enclosure, closed-vent system, or control device used to comply with the requirements of Subsections R315-264-1084(i)(1) and (i)(2).

(4) The owner or operator shall inspect and monitor the closed-vent system and control device as specified in Section R315-264-1087.

(j) The owner or operator shall transfer hazardous waste to a tank subject to Section R315-264-1084 in accordance with the following requirements:

(1) Transfer of hazardous waste, except as provided in Subsection R315-264-1084(j)(2), to the tank from another tank subject to Section R315-264-1084 or from a surface impoundment subject to Section R315-264-1085 shall be conducted using continuous hard-piping or another closed system that does not allow exposure of the hazardous waste to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of Subsection R307-214-2(29), which incorporates 40 CFR part 63, subpart RR-National Emission Standards for Individual Drain Systems.

(2) The requirements of Subsection R315-264-1084(j)(1) do not apply when transferring a hazardous waste to the tank under any of the following conditions:

(i) The hazardous waste meets the average VO concentration conditions specified in Subsection R315-264-1082(c)(1) at the point of waste origination.

(ii) The hazardous waste has been treated by an organic destruction or removal process to meet the requirements in Subsection R315-264-1082(c)(2).

(iii) The hazardous waste meets the requirements of Subsection R315-264-1082(c)(4).

(k) The owner or operator shall repair each defect detected during an inspection performed in accordance with the requirements of Subsections R315-264-1084(c)(4), (e)(3), (f)(3), or (g)(3) as follows:

(1) The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection, and repair shall be completed as soon as possible but no later than 45 calendar days after detection except as provided in Subsection R315-264-1084(k)(2).

(2) Repair of a defect may be delayed beyond 45 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the tank and no alternative tank capacity is available at the site to accept the hazardous waste normally managed in the tank. In this case, the owner or operator shall repair the defect the next time the process or unit that is generating the hazardous waste managed in the tank stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

(l) Following the initial inspection and monitoring of the cover as required by the applicable provisions of Sections R315-264-1080 through 1090, subsequent inspection and monitoring may be performed at intervals longer than 1 year under the following special conditions:

(1) In the case when inspecting or monitoring the cover would expose a worker to dangerous, hazardous, or other unsafe conditions, then the owner or operator may designate a cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:

(i) Prepare a written explanation for the cover stating the

reasons why the cover is unsafe to visually inspect or to monitor, if required.

(ii) Develop and implement a written plan and schedule to inspect and monitor the cover, using the procedures specified in the applicable section of Sections R315-264-1080 through 1090, as frequently as practicable during those times when a worker can safely access the cover.

(2) In the case when a tank is buried partially or entirely underground, an owner or operator is required to inspect and monitor, as required by the applicable provisions of Section R315-264-1084, only those portions of the tank cover and those connections to the tank, e.g., fill ports, access hatches, gauge wells, etc., that are located on or above the ground surface.

R315-264-1085. Standards: Surface Impoundments.

(a) The provisions of Section R315-264-1085 apply to the control of air pollutant emissions from surface impoundments for which Subsection R315-264-1082(b) references the use of Section R315-264-1085 for such air emission control.

(b) The owner or operator shall control air pollutant emissions from the surface impoundment by installing and operating either of the following:

(1) A floating membrane cover in accordance with the provisions specified in Subsection R315-264-1085(c); or

(2) A cover that is vented through a closed-vent system to a control device in accordance with the provisions specified in Subsection R315-264-1085(d).

(c) The owner or operator who controls air pollutant emissions from a surface impoundment using a floating membrane cover shall meet the requirements specified in Subsections R315-264-1085(c)(1) through (c)(3).

(1) The surface impoundment shall be equipped with a floating membrane cover designed to meet the following specifications:

(i) The floating membrane cover shall be designed to float on the liquid surface during normal operations and form a continuous barrier over the entire surface area of the liquid.

(ii) The cover shall be fabricated from a synthetic membrane material that is either:

(A) High density polyethylene (HDPE) with a thickness no less than 2.5 millimeters; or

(B) A material or a composite of different materials determined to have both organic permeability properties that are equivalent to those of the material listed in Subsection R315-264-1085(c)(1)(ii)(A) and chemical and physical properties that maintain the material integrity for the intended service life of the material.

(iii) The cover shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between cover section seams or between the interface of the cover edge and its foundation mountings.

(iv) Except as provided for in Subsection R315-264-1085(c)(1)(v), each opening in the floating membrane cover shall be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device.

(v) The floating membrane cover may be equipped with one or more emergency cover drains for removal of stormwater. Each emergency cover drain shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening or a flexible fabric sleeve seal.

(vi) The closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the closure devices throughout their intended service life. Factors to be considered when selecting the materials of construction and designing the cover and closure devices shall

include: Organic vapor permeability; the effects of any contact with the liquid and its vapor managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the floating membrane cover is installed.

(2) Whenever a hazardous waste is in the surface impoundment, the floating membrane cover shall float on the liquid and each closure device shall be secured in the closed position except as follows:

(i) Opening of closure devices or removal of the cover is allowed at the following times:

(A) To provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the surface impoundment, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly replace the cover and secure the closure device in the closed position, as applicable.

(B) To remove accumulated sludge or other residues from the bottom of surface impoundment.

(ii) Opening of a safety device, as defined in 40 CFR 265.1081, which is adopted by reference, is allowed at any time conditions require doing so to avoid an unsafe condition.

(3) The owner or operator shall inspect the floating membrane cover in accordance with the following procedures:

(i) The floating membrane cover and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover section seams or between the interface of the cover edge and its foundation mountings; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The owner or operator shall perform an initial inspection of the floating membrane cover and its closure devices on or before the date that the surface impoundment becomes subject to Section R315-264-1085. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in Subsection R315-264-1085(g).

(iii) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subsection R315-264-1085(f).

(iv) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Subsection R315-264-1089(c).

(d) The owner or operator who controls air pollutant emissions from a surface impoundment using a cover vented to a control device shall meet the requirements specified in Subsections R315-264-1085(d)(1) through (d)(3).

(1) The surface impoundment shall be covered by a cover and vented directly through a closed-vent system to a control device in accordance with the following requirements:

(i) The cover and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the surface impoundment.

(ii) Each opening in the cover not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace underneath the cover is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace

underneath the cover is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions using the procedure specified in Subsection R315-264-1083(d).

(iii) The cover and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the cover and closure devices throughout their intended service life. Factors to be considered when selecting the materials of construction and designing the cover and closure devices shall include: Organic vapor permeability; the effects of any contact with the liquid or its vapors managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the cover is installed.

(iv) The closed-vent system and control device shall be designed and operated in accordance with the requirements of Section R315-264-1087.

(2) Whenever a hazardous waste is in the surface impoundment, the cover shall be installed with each closure device secured in the closed position and the vapor headspace underneath the cover vented to the control device except as follows:

(i) Venting to the control device is not required, and opening of closure devices or removal of the cover is allowed at the following times:

(A) To provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the surface impoundment, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the surface impoundment.

(B) To remove accumulated sludge or other residues from the bottom of the surface impoundment.

(ii) Opening of a safety device, as defined in 40 CFR 265.1081, which is adopted by reference, is allowed at any time conditions require doing so to avoid an unsafe condition.

(3) The owner or operator shall inspect and monitor the air emission control equipment in accordance with the following procedures:

(i) The surface impoundment cover and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover section seams or between the interface of the cover edge and its foundation mountings; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The closed-vent system and control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in Section R315-264-1087.

(iii) The owner or operator shall perform an initial inspection of the air emission control equipment on or before the date that the surface impoundment becomes subject to Section R315-264-1085. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in Subsection R315-264-1085(g).

(iv) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subsection R315-264-1085(f).

(v) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in

Subsection R315-264-1089(c).

(e) The owner or operator shall transfer hazardous waste to a surface impoundment subject to Section R315-264-1085 in accordance with the following requirements:

(1) Transfer of hazardous waste, except as provided in Subsection R315-264-1085(e)(2), to the surface impoundment from another surface impoundment subject to Section R315-264-1085 or from a tank subject to Section R315-264-1084 shall be conducted using continuous hard-piping or another closed system that does not allow exposure of the waste to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of Subsection R307-214-2(29), which incorporates 40 CFR part 63, subpart RR-National Emission Standards for Individual Drain Systems.

(2) The requirements of Subsection R315-264-1085(e)(1) do not apply when transferring a hazardous waste to the surface impoundment under either of the following conditions:

(i) The hazardous waste meets the average VO concentration conditions specified in Subsection R315-264-1082(c)(1) at the point of waste origination.

(ii) The hazardous waste has been treated by an organic destruction or removal process to meet the requirements in Subsection R315-264-1082(c)(2).

(iii) The hazardous waste meets the requirements of Subsection R315-264-1082(c)(4).

(f) The owner or operator shall repair each defect detected during an inspection performed in accordance with the requirements of Subsections R315-264-1085(c)(3) or (d)(3) as follows:

(1) The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection and repair shall be completed as soon as possible but no later than 45 calendar days after detection except as provided in Subsection R315-264-1085(f)(2).

(2) Repair of a defect may be delayed beyond 45 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the surface impoundment and no alternative capacity is available at the site to accept the hazardous waste normally managed in the surface impoundment. In this case, the owner or operator shall repair the defect the next time the process or unit that is generating the hazardous waste managed in the surface impoundment stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

(g) Following the initial inspection and monitoring of the cover as required by the applicable provisions of Sections R315-264-1080 through 1090, subsequent inspection and monitoring may be performed at intervals longer than 1 year in the case when inspecting or monitoring the cover would expose a worker to dangerous, hazardous, or other unsafe conditions. In this case, the owner or operator may designate the cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:

(1) Prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required.

(2) Develop and implement a written plan and schedule to inspect and monitor the cover using the procedures specified in the applicable section of Sections R315-264-1080 through 1090 as frequently as practicable during those times when a worker can safely access the cover.

R315-264-1086. Standards: Containers.

(a) The provisions of Section R315-264-1086 apply to the control of air pollutant emissions from containers for which Subsection R315-264-1082(b) references the use of Section R315-264-1086 for such air emission control.

(b) General requirements.

(1) The owner or operator shall control air pollutant emissions from each container subject to Section R315-264-1086 in accordance with the following requirements, as applicable to the container, except when the special provisions for waste stabilization processes specified in Subsection R315-264-1086(b)(2) apply to the container.

(i) For a container having a design capacity greater than 0.1 cubic meters and less than or equal to 0.46 cubic meters, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in Subsection R315-264-1086(c).

(ii) For a container having a design capacity greater than 0.46 cubic meters that is not in light material service, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in Subsection R315-264-1086(c).

(iii) For a container having a design capacity greater than 0.46 cubic meters that is in light material service, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 2 standards specified in Subsection R315-264-1086(d).

(2) When a container having a design capacity greater than 0.1 cubic meters is used for treatment of a hazardous waste by a waste stabilization process, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 3 standards specified in Subsection R315-264-1086(e) at those times during the waste stabilization process when the hazardous waste in the container is exposed to the atmosphere.

(c) Container Level 1 standards.

(1) A container using Container Level 1 controls is one of the following:

(i) A container that meets the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation as specified in Subsection R315-264-1086(f).

(ii) A container equipped with a cover and closure devices that form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the container, e.g., a lid on a drum or a suitably secured tarp on a roll-off box, or may be an integral part of the container structural design, e.g., a "portable tank" or bulk cargo container equipped with a screw-type cap.

(iii) An open-top container in which an organic-vapor suppressing barrier is placed on or over the hazardous waste in the container such that no hazardous waste is exposed to the atmosphere. One example of such a barrier is application of a suitable organic-vapor suppressing foam.

(2) A container used to meet the requirements of Subsections R315-264-1086(c)(1)(ii) or (c)(1)(iii) shall be equipped with covers and closure devices, as applicable to the container, that are composed of suitable materials to minimize exposure of the hazardous waste to the atmosphere and to maintain the equipment integrity, for as long as the container is in service. Factors to be considered in selecting the materials of construction and designing the cover and closure devices shall include: Organic vapor permeability; the effects of contact with the hazardous waste or its vapor managed in the container; the effects of outdoor exposure of the closure device or cover material to wind, moisture, and sunlight; and the operating practices for which the container is intended to be used.

(3) Whenever a hazardous waste is in a container using Container Level 1 controls, the owner or operator shall install all covers and closure devices for the container, as applicable to the container, and secure and maintain each closure device in the closed position except as follows:

(i) Opening of a closure device or cover is allowed for the

purpose of adding hazardous waste or other material to the container as follows:

(A) In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

(B) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

(ii) Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container as follows:

(A) For the purpose of meeting the requirements of Section R315-264-1086, an empty container as defined in Subsection R315-261-7(b) may be open to the atmosphere at any time, i.e., covers and closure devices are not required to be secured in the closed position on an empty container.

(B) In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container as defined in Subsection R315-261-7(b), the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

(iii) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

(iv) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

(v) Opening of a safety device, as defined in 40 CFR 265.1081, which is adopted by reference, is allowed at any time

conditions require doing so to avoid an unsafe condition.

(4) The owner or operator of containers using Container Level 1 controls shall inspect the containers and their covers and closure devices as follows:

(i) In the case when a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied within 24 hours after the container is accepted at the facility, i.e., does not meet the conditions for an empty container as specified in Subsection R315-261-7(b), the owner or operator shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection shall be conducted on or before the date that the container is accepted at the facility, i.e., the date the container becomes subject to container standards of Sections R315-264-1080 through 1090. For purposes of this requirement, the date of acceptance is the date of signature that the facility owner or operator enters on Item 20 of the Uniform Hazardous Waste Manifest in the appendix to Rule R315-262 (EPA Forms 8700-22 and 8700-22A), as required under Section R315-264-71. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subsection R315-264-1086(c)(4)(iii).

(ii) In the case when a container used for managing hazardous waste remains at the facility for a period of 1 year or more, the owner or operator shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subsection R315-264-1086(c)(4)(iii).

(iii) When a defect is detected for the container, cover, or closure devices, the owner or operator shall make first efforts at repair of the defect no later than 24 hours after detection and repair shall be completed as soon as possible but no later than 5 calendar days after detection. If repair of a defect cannot be completed within 5 calendar days, then the hazardous waste shall be removed from the container and the container shall not be used to manage hazardous waste until the defect is repaired.

(5) The owner or operator shall maintain at the facility a copy of the procedure used to determine that containers with capacity of 0.46 cubic meters or greater, which do not meet applicable DOT regulations as specified in Subsection R315-264-1086(f), are not managing hazardous waste in light material service.

(d) Container Level 2 standards.

(1) A container using Container Level 2 controls is one of the following:

(i) A container that meets the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation as specified in Subsection R315-264-1086(f).

(ii) A container that operates with no detectable organic emissions as defined in 40 CFR 265.1081, which is adopted by reference, and determined in accordance with the procedure specified in Subsection R315-264-1086(g).

(iii) A container that has been demonstrated within the preceding 12 months to be vapor-tight by using 40 CFR part 60, appendix A, Method 27 in accordance with the procedure specified in Subsection R315-264-1086(h).

(2) Transfer of hazardous waste in or out of a container using Container Level 2 controls shall be conducted in such a manner as to minimize exposure of the hazardous waste to the atmosphere, to the extent practical, considering the physical properties of the hazardous waste and good engineering and

safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that the Director considers to meet the requirements of Subsection R315-264-1086(d) include using any one of the following: A submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous waste is filled and subsequently purging the transfer line before removing it from the container opening.

(3) Whenever a hazardous waste is in a container using Container Level 2 controls, the owner or operator shall install all covers and closure devices for the container, and secure and maintain each closure device in the closed position except as follows:

(i) Opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container as follows:

(A) In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

(B) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

(ii) Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container as follows:

(A) For the purpose of meeting the requirements of Section R315-264-1086, an empty container as defined in Subsection R315-261-7(b) may be open to the atmosphere at any time, i.e., covers and closure devices are not required to be secured in the closed position on an empty container.

(B) In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container as defined in Subsection R315-261-7(b), the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

(iii) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

(iv) Opening of a spring-loaded, pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design

specifications. The device shall be designed to operate with no detectable organic emission when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

(v) Opening of a safety device, as defined in 40 CFR 265.1081, which is adopted by reference, is allowed at any time conditions require doing so to avoid an unsafe condition.

(4) The owner or operator of containers using Container Level 2 controls shall inspect the containers and their covers and closure devices as follows:

(i) In the case when a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied within 24 hours after the container is accepted at the facility, i.e., does not meet the conditions for an empty container as specified in Subsection R35-261-7(b), the owner or operator shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection shall be conducted on or before the date that the container is accepted at the facility, i.e., the date the container becomes subject to the container standards of Sections R315-264-1080 through. For purposes of this requirement, the date of acceptance is the date of signature that the facility owner or operator enters on Item 20 of the Uniform Hazardous Waste Manifest in the appendix to Rule R315-262 (EPA Forms 8700-22 and 8700-22A), as required under Section R315-264-71. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subsection R315-264-1086(d)(4)(iii).

(ii) In the case when a container used for managing hazardous waste remains at the facility for a period of 1 year or more, the owner or operator shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subsection R315-264-1086(d)(4)(iii).

(iii) When a defect is detected for the container, cover, or closure devices, the owner or operator shall make first efforts at repair of the defect no later than 24 hours after detection, and repair shall be completed as soon as possible but no later than 5 calendar days after detection. If repair of a defect cannot be completed within 5 calendar days, then the hazardous waste shall be removed from the container and the container shall not be used to manage hazardous waste until the defect is repaired.

(e) Container Level 3 standards.

(1) A container using Container Level 3 controls is one of the following:

(i) A container that is vented directly through a closed-vent system to a control device in accordance with the requirements of Subsection R315-264-1086(e)(2)(ii).

(ii) A container that is vented inside an enclosure which is exhausted through a closed-vent system to a control device in

accordance with the requirements of Subsections R315-264-1086(e)(2)(i) and (e)(2)(ii).

(2) The owner or operator shall meet the following requirements, as applicable to the type of air emission control equipment selected by the owner or operator:

(i) The container enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T-Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of containers through the enclosure by conveyor or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T-Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.

(ii) The closed-vent system and control device shall be designed and operated in accordance with the requirements of Section R315-264-1087.

(3) Safety devices, as defined in 40 CFR 265.1081, which is adopted by reference, may be installed and operated as necessary on any container, enclosure, closed-vent system, or control device used to comply with the requirements of Subsection R315-264-1086(e)(1).

(4) Owners and operators using Container Level 3 controls in accordance with the provisions of Sections R315-264-1086 through 1090 shall inspect and monitor the closed-vent systems and control devices as specified in Subsection R315-264-1087.

(5) Owners and operators that use Container Level 3 controls in accordance with the provisions of Sections R315-264-1086 through 1090 shall prepare and maintain the records specified in Subsection R315-264-1089(d).

(6) Transfer of hazardous waste in or out of a container using Container Level 3 controls shall be conducted in such a manner as to minimize exposure of the hazardous waste to the atmosphere, to the extent practical, considering the physical properties of the hazardous waste and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that the Director considers to meet the requirements of Subsection R315-264-1086(e) include using any one of the following: A submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous waste is filled and subsequently purging the transfer line before removing it from the container opening.

(f) For the purpose of compliance with Subsection R315-264-1086(c)(1)(i) or (d)(1)(i), containers shall be used that meet the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation as follows:

(1) The container meets the applicable requirements specified in 49 CFR part 178-Specifications for Packaging or 49 CFR part 179-Specifications for Tank Cars.

(2) Hazardous waste is managed in the container in accordance with the applicable requirements specified in 49 CFR part 107, subpart B-Exemptions; 49 CFR part 172-Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements; 49 CFR part 173-Shippers-General Requirements for Shipments and Packages; and 49 CFR part 180-Continuing Qualification and Maintenance of Packagings.

(3) For the purpose of complying with Sections R315-264-

1086 through 1090, no exceptions to the 49 CFR part 178 or part 179 regulations are allowed except as provided for in Subsection R315-264-1086(f)(4).

(4) For a lab pack that is managed in accordance with the requirements of 49 CFR part 178 for the purpose of complying with Sections R315-264-1086 through 1090, an owner or operator may comply with the exceptions for combination packagings specified in 49 CFR 173.12(b).

(g) To determine compliance with the no detectable organic emissions requirement of Subsection R315-264-1086(d)(1)(ii), the procedure specified in Subsection R315-264-1083(d) shall be used.

(1) Each potential leak interface, i.e., a location where organic vapor leakage could occur, on the container, its cover, and associated closure devices, as applicable to the container, shall be checked. Potential leak interfaces that are associated with containers include, but are not limited to: The interface of the cover rim and the container wall; the periphery of any opening on the container or container cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.

(2) The test shall be performed when the container is filled with a material having a volatile organic concentration representative of the range of volatile organic concentrations for the hazardous wastes expected to be managed in this type of container. During the test, the container cover and closure devices shall be secured in the closed position.

(h) Procedure for determining a container to be vapor-tight using Method 27 of 40 CFR part 60, appendix A for the purpose of complying with Subsection R315-264-1086(d)(1)(iii).

(1) The test shall be performed in accordance with Method 27 of 40 CFR part 60, appendix A of this chapter.

(2) A pressure measurement device shall be used that has a precision of +/- 2.5 mm water and that is capable of measuring above the pressure at which the container is to be tested for vapor tightness.

(3) If the test results determined by Method 27 indicate that the container sustains a pressure change less than or equal to 750 Pascals within 5 minutes after it is pressurized to a minimum of 4,500 Pascals, then the container is determined to be vapor-tight.

R315-264-1087. Standards: Closed-Vent Systems and Control Devices.

(a) Section R315-264-1087 applies to each closed-vent system and control device installed and operated by the owner or operator to control air emissions in accordance with standards of Sections R315-264-1080 through 1090.

(b) The closed-vent system shall meet the following requirements:

(1) The closed-vent system shall route the gases, vapors, and fumes emitted from the hazardous waste in the waste management unit to a control device that meets the requirements specified in Subsection R315-264-1087(c).

(2) The closed-vent system shall be designed and operated in accordance with the requirements specified in Subsection R315-264-1033(k).

(3) In the case when the closed-vent system includes bypass devices that could be used to divert the gas or vapor stream to the atmosphere before entering the control device, each bypass device shall be equipped with either a flow indicator as specified in Subsection R315-264-1087(b)(3)(i) or a seal or locking device as specified in Subsection R315-264-1087(b)(3)(ii). For the purpose of complying with Subsection R315-264-1087(b), low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, spring loaded pressure relief valves, and other fittings used for safety purposes are not considered to be bypass devices.

(i) If a flow indicator is used to comply with Subsection

R315-264-1087(b)(3), the indicator shall be installed at the inlet to the bypass line used to divert gases and vapors from the closed-vent system to the atmosphere at a point upstream of the control device inlet. For Subsection R315-264-1087(b), a flow indicator means a device which indicates the presence of either gas or vapor flow in the bypass line.

(ii) If a seal or locking device is used to comply with Subsection R315-264-1087(b)(3), the device shall be placed on the mechanism by which the bypass device position is controlled, e.g., valve handle, damper lever, when the bypass device is in the closed position such that the bypass device cannot be opened without breaking the seal or removing the lock. Examples of such devices include, but are not limited to, a car-seal or a lock-and-key configuration valve. The owner or operator shall visually inspect the seal or closure mechanism at least once every month to verify that the bypass mechanism is maintained in the closed position.

(4) The closed-vent system shall be inspected and monitored by the owner or operator in accordance with the procedure specified in Subsection R315-264-1033(l).

(c) The control device shall meet the following requirements:

(1) The control device shall be one of the following devices:

(i) A control device designed and operated to reduce the total organic content of the inlet vapor stream vented to the control device by at least 95 percent by weight;

(ii) An enclosed combustion device designed and operated in accordance with the requirements of Subsection R315-264-1033(c); or

(iii) A flare designed and operated in accordance with the requirements of Subsection R315-264-1033(d).

(2) The owner or operator who elects to use a closed-vent system and control device to comply with the requirements of Section R315-264-1087 shall comply with the requirements specified in Subsections R315-264-1087(c)(2)(i) through (c)(2)(vi).

(i) Periods of planned routine maintenance of the control device, during which the control device does not meet the specifications of Subsections R315-264-1087(c)(1)(i), (c)(1)(ii), or (c)(1)(iii), as applicable, shall not exceed 240 hours per year.

(ii) The specifications and requirements in Subsections R315-264-1087(c)(1)(i), (c)(1)(ii), and (c)(1)(iii) for control devices do not apply during periods of planned routine maintenance.

(iii) The specifications and requirements in Subsections R315-264-1087(c)(1)(i), (c)(1)(ii), and (c)(1)(iii) for control devices do not apply during a control device system malfunction.

(iv) The owner or operator shall demonstrate compliance with the requirements of Subsection R315-264-1087(c)(2)(i), i.e., planned routine maintenance of a control device, during which the control device does not meet the specifications of Subsections R315-264-1087(c)(1)(i), (c)(1)(ii), or (c)(1)(iii), as applicable, shall not exceed 240 hours per year, by recording the information specified in Subsection R315-264-1089(e)(1)(v).

(v) The owner or operator shall correct control device system malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of air pollutants.

(vi) The owner or operator shall operate the closed-vent system such that gases, vapors, or fumes are not actively vented to the control device during periods of planned maintenance or control device system malfunction, i.e., periods when the control device is not operating or not operating normally, except in cases when it is necessary to vent the gases, vapors, and/or fumes to avoid an unsafe condition or to implement malfunction corrective actions or planned maintenance actions.

(3) The owner or operator using a carbon adsorption system to comply with Subsection R315-264-1087(c)(1) shall

operate and maintain the control device in accordance with the following requirements:

(i) Following the initial startup of the control device, all activated carbon in the control device shall be replaced with fresh carbon on a regular basis in accordance with the requirements of Subsections R315-264-1033(g) or 1033(h).

(ii) All carbon that is a hazardous waste and that is removed from the control device shall be managed in accordance with the requirements of Subsection R315-264-1033(n), regardless of the average volatile organic concentration of the carbon.

(4) An owner or operator using a control device other than a thermal vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system to comply with Subsection R315-264-1087(c)(1) shall operate and maintain the control device in accordance with the requirements of Subsection R315-264-1033(j).

(5) The owner or operator shall demonstrate that a control device achieves the performance requirements of Subsection R315-264-1087(c)(1) as follows:

(i) An owner or operator shall demonstrate using either a performance test as specified in Subsection R315-264-1087(c)(5)(iii) or a design analysis as specified in Subsection R315-264-1087(c)(5)(iv) the performance of each control device except for the following:

(A) A flare;

(B) A boiler or process heater with a design heat input capacity of 44 megawatts or greater;

(C) A boiler or process heater into which the vent stream is introduced with the primary fuel;

(D) A boiler or industrial furnace burning hazardous waste for which the owner or operator has been issued a final permit under Rule R315-270 and has designed and operates the unit in accordance with the requirements of Sections R315-266-100 through 112; or

(E) A boiler or industrial furnace burning hazardous waste for which the owner or operator has designed and operates in accordance with the interim status requirements of Sections R315-266-100 through 112.

(ii) An owner or operator shall demonstrate the performance of each flare in accordance with the requirements specified in Subsection R315-264-1033(e).

(iii) For a performance test conducted to meet the requirements of Subsection R315-264-1087(c)(5)(i), the owner or operator shall use the test methods and procedures specified in Subsections R315-264-1034(c)(1) through (c)(4).

(iv) For a design analysis conducted to meet the requirements of Subsection R315-264-1087(c)(5)(i), the design analysis shall meet the requirements specified in Subsection R315-264-1035(b)(4)(iii).

(v) The owner or operator shall demonstrate that a carbon adsorption system achieves the performance requirements of Subsection R315-264-1087(c)(1) based on the total quantity of organics vented to the atmosphere from all carbon adsorption system equipment that is used for organic adsorption, organic desorption or carbon regeneration, organic recovery, and carbon disposal.

(6) If the owner or operator and the Director do not agree on a demonstration of control device performance using a design analysis then the disagreement shall be resolved using the results of a performance test performed by the owner or operator in accordance with the requirements of Subsection R315-264-1087(c)(5)(iii). The Director may choose to have an authorized representative observe the performance test.

(7) The closed-vent system and control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in Subsections R315-264-1033(f)(2) and 1033(l). The readings from each monitoring device required by Subsection R315-264-1033(f)(2) shall be

inspected at least once each operating day to check control device operation. Any necessary corrective measures shall be immediately implemented to ensure the control device is operated in compliance with the requirements of Section R315-264-1087.

R315-264-1088. Inspection and Monitoring Requirements.

(a) The owner or operator shall inspect and monitor air emission control equipment used to comply with Sections R315-264-1080 through 1090 in accordance with the applicable requirements specified in Sections R315-264-1084 through 1087.

(b) The owner or operator shall develop and implement a written plan and schedule to perform the inspections and monitoring required by Subsection R315-264-1088(a). The owner or operator shall incorporate this plan and schedule into the facility inspection plan required under Section R315-264-15.

R315-264-1089. Recordkeeping Requirements.

(a) Each owner or operator of a facility subject to requirements of Sections R315-264-1080 through 1090 shall record and maintain the information specified in Subsections R315-264-1089(b) through (j), as applicable to the facility. Except for air emission control equipment design documentation and information required by Subsections R315-264-1089(i) and (j), records required by Section R315-264-1089 shall be maintained in the operating record for a minimum of 3 years. Air emission control equipment design documentation shall be maintained in the operating record until the air emission control equipment is replaced or otherwise no longer in service. Information required by Subsections R315-264-1089(i) and (j) shall be maintained in the operating record for as long as the waste management unit is not using air emission controls specified in Sections R315-264-1084 through 1087 in accordance with the conditions specified in Subsection R315-264-1080(d) or 1080(b)(7), respectively.

(b) The owner or operator of a tank using air emission controls in accordance with the requirements of Section R315-264-1084 shall prepare and maintain records for the tank that include the following information:

(1) For each tank using air emission controls in accordance with the requirements of Subsection R315-264-1084, the owner or operator shall record:

(i) A tank identification number, or other unique identification description as selected by the owner or operator.

(ii) A record for each inspection required by Section R315-264-1084 that includes the following information:

(A) Date inspection was conducted.

(B) For each defect detected during the inspection: The location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the requirements of Section R315-264-1084, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(2) In addition to the information required by Subsection R315-264-1089(b)(1), the owner or operator shall record the following information, as applicable to the tank:

(i) The owner or operator using a fixed roof to comply with the Tank Level 1 control requirements specified in Subsection R315-264-1084(c) shall prepare and maintain records for each determination for the maximum organic vapor pressure of the hazardous waste in the tank performed in accordance with the requirements of Subsection R315-264-1084(c). The records shall include the date and time the samples were collected, the analysis method used, and the analysis results.

(ii) The owner or operator using an internal floating roof to comply with the Tank Level 2 control requirements specified

in Subsection R315-264-1084(e) shall prepare and maintain documentation describing the floating roof design.

(iii) Owners and operators using an external floating roof to comply with the Tank Level 2 control requirements specified in Subsection R315-264-1084(f) shall prepare and maintain the following records:

(A) Documentation describing the floating roof design and the dimensions of the tank.

(B) Records for each seal gap inspection required by Subsection R315-264-1084(f)(3) describing the results of the seal gap measurements. The records shall include the date that the measurements were performed, the raw data obtained for the measurements, and the calculations of the total gap surface area. In the event that the seal gap measurements do not conform to the specifications in Subsection R315-264-1084(f)(1), the records shall include a description of the repairs that were made, the date the repairs were made, and the date the tank was emptied, if necessary.

(iv) Each owner or operator using an enclosure to comply with the Tank Level 2 control requirements specified in Subsection R315-264-1084(i) shall prepare and maintain the following records:

(A) Records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T---Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.

(B) Records required for the closed-vent system and control device in accordance with the requirements of Subsection R315-264-1089(e).

(c) The owner or operator of a surface impoundment using air emission controls in accordance with the requirements of Section R315-264-1085 shall prepare and maintain records for the surface impoundment that include the following information:

(1) A surface impoundment identification number, or other unique identification description as selected by the owner or operator.

(2) Documentation describing the floating membrane cover or cover design, as applicable to the surface impoundment, that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the specifications listed in Subsection R315-264-1085(c).

(3) A record for each inspection required by Section R315-264-1085 that includes the following information:

(i) Date inspection was conducted.

(ii) For each defect detected during the inspection the following information: The location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of Subsection R315-264-1085(f), the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(4) For a surface impoundment equipped with a cover and vented through a closed-vent system to a control device, the owner or operator shall prepare and maintain the records specified in Subsection R315-264-1089(e).

(d) The owner or operator of containers using Container Level 3 air emission controls in accordance with the requirements of Section R315-264-1086 shall prepare and maintain records that include the following information:

(1) Records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T-Criteria for and Verification of a

Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.

(2) Records required for the closed-vent system and control device in accordance with the requirements of Subsection R315-264-1089(e).

(e) The owner or operator using a closed-vent system and control device in accordance with the requirements of Section R315-264-1087 shall prepare and maintain records that include the following information:

(1) Documentation for the closed-vent system and control device that includes:

(i) Certification that is signed and dated by the owner or operator stating that the control device is designed to operate at the performance level documented by a design analysis as specified in Subsection R315-264-1089(e)(1)(ii) or by performance tests as specified in Subsection R315-264-1089(e)(1)(iii) when the tank, surface impoundment, or container is or would be operating at capacity or the highest level reasonably expected to occur.

(ii) If a design analysis is used, then design documentation as specified in Subsection R315-264-1035(b)(4). The documentation shall include information prepared by the owner or operator or provided by the control device manufacturer or vendor that describes the control device design in accordance with Subsection R315-264-1035(b)(4)(iii) and certification by the owner or operator that the control equipment meets the applicable specifications.

(iii) If performance tests are used, then a performance test plan as specified in Subsection R315-264-1035(b)(3) and all test results.

(iv) Information as required by Subsection R315-264-1035(c)(1) and Subsection R315-264-1035(c)(2), as applicable.

(v) An owner or operator shall record, on a semiannual basis, the information specified in Subsections R315-264-1089(e)(1)(v)(A) and (e)(1)(v)(B) for those planned routine maintenance operations that would require the control device not to meet the requirements of Subsections R315-264-1087(c)(1)(i), (c)(1)(ii), or (c)(1)(iii), as applicable.

(A) A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6-month period. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.

(B) A description of the planned routine maintenance that was performed for the control device during the previous 6-month period. This description shall include the type of maintenance performed and the total number of hours during those 6 months that the control device did not meet the requirements of Subsections R315-264-1087 (c)(1)(i), (c)(1)(ii), or (c)(1)(iii), as applicable, due to planned routine maintenance.

(vi) An owner or operator shall record the information specified in Subsections R315-264-1089(e)(1)(vi)(A) through (e)(1)(vi)(C) for those unexpected control device system malfunctions that would require the control device not to meet the requirements of Subsections R315-264-1087 (c)(1)(i), (c)(1)(ii), or (c)(1)(iii), as applicable.

(A) The occurrence and duration of each malfunction of the control device system.

(B) The duration of each period during a malfunction when gases, vapors, or fumes are vented from the waste management unit through the closed-vent system to the control device while the control device is not properly functioning.

(C) Actions taken during periods of malfunction to restore a malfunctioning control device to its normal or usual manner of operation.

(vii) Records of the management of carbon removed from a carbon adsorption system conducted in accordance with Subsection R315-264-1087(c)(3)(ii).

(f) The owner or operator of a tank, surface impoundment,

or container exempted from standards in accordance with the provisions of Subsection R315-264-1082(c) shall prepare and maintain the following records, as applicable:

(1) For tanks, surface impoundments, and containers exempted under the hazardous waste organic concentration conditions specified in Subsections R315-264-1082(c)(1) or 1082(c)(2)(i) through (c)(2)(vi), the owner or operator shall record the information used for each waste determination, e.g., test results, measurements, calculations, and other documentation, in the facility operating log. If analysis results for waste samples are used for the waste determination, then the owner or operator shall record the date, time, and location that each waste sample is collected in accordance with applicable requirements of Section R315-264-1083.

(2) For tanks, surface impoundments, or containers exempted under the provisions of Subsections R315-264-1082(c)(2)(vii) or (c)(2)(viii), the owner or operator shall record the identification number for the incinerator, boiler, or industrial furnace in which the hazardous waste is treated.

(g) An owner or operator designating a cover as "unsafe to inspect and monitor" pursuant to Subsections R315-264-1084(l) or 1085(g) shall record in a log that is kept in the facility operating record the following information: The identification numbers for waste management units with covers that are designated as "unsafe to inspect and monitor," the explanation for each cover stating why the cover is unsafe to inspect and monitor, and the plan and schedule for inspecting and monitoring each cover.

(h) The owner or operator of a facility that is subject to Section R315-264-1080 through 1090 and to the control device standards in 40 CFR part 60, subpart VV, or 40 CFR part 61, subpart V, may elect to demonstrate compliance with the applicable sections of Section R315-264-1080 through 1090 by documentation either pursuant to Section R315-264-1080 through 1090, or pursuant to the provisions of 40 CFR part 60, subpart VV or 40 CFR part 61, subpart V, to the extent that the documentation required by 40 CFR parts 60 or 61 duplicates the documentation required by Section R315-264-1089.

(i) For each tank or container not using air emission controls specified in Sections R315-264-1084 through 1087 in accordance with the conditions specified in Subsection R315-264-1080(d), the owner or operator shall record and maintain the following information:

(1) A list of the individual organic peroxide compounds manufactured at the facility that meet the conditions specified in Subsection R315-264-1080(d)(1).

(2) A description of how the hazardous waste containing the organic peroxide compounds identified in Subsection R315-264-1089(i)(1) are managed at the facility in tanks and containers. This description shall include:

(i) For the tanks used at the facility to manage this hazardous waste, sufficient information shall be provided to describe for each tank: A facility identification number for the tank; the purpose and placement of this tank in the management train of this hazardous waste; and the procedures used to ultimately dispose of the hazardous waste managed in the tanks.

(ii) For containers used at the facility to manage these hazardous wastes, sufficient information shall be provided to describe: A facility identification number for the container or group of containers; the purpose and placement of this container, or group of containers, in the management train of this hazardous waste; and the procedures used to ultimately dispose of the hazardous waste handled in the containers.

(3) An explanation of why managing the hazardous waste containing the organic peroxide compounds identified in Subsection R315-264-1089(i)(1) in the tanks and containers as described in Subsection R315-264-1089(i)(2) would create an undue safety hazard if the air emission controls, as required under Sections R315-264-1084 through 1087, are installed and

operated on these waste management units. This explanation shall include the following information:

(i) For tanks used at the facility to manage these hazardous wastes, sufficient information shall be provided to explain: How use of the required air emission controls on the tanks would affect the tank design features and facility operating procedures currently used to prevent an undue safety hazard during the management of this hazardous waste in the tanks; and why installation of safety devices on the required air emission controls, as allowed under Section R315-264-1080 through 1090, will not address those situations in which evacuation of tanks equipped with these air emission controls is necessary and consistent with good engineering and safety practices for handling organic peroxides.

(ii) For containers used at the facility to manage these hazardous wastes, sufficient information shall be provided to explain: How use of the required air emission controls on the containers would affect the container design features and handling procedures currently used to prevent an undue safety hazard during the management of this hazardous waste in the containers; and why installation of safety devices on the required air emission controls, as allowed under Section R315-264-1080 through 1090, will not address those situations in which evacuation of containers equipped with these air emission controls is necessary and consistent with good engineering and safety practices for handling organic peroxides.

(j) For each hazardous waste management unit not using air emission controls specified in Sections R315-264-1084 through 1087 in accordance with the requirements of Subsection R315-264-1080(b)(7), the owner and operator shall record and maintain the following information:

(1) Certification that the waste management unit is equipped with and operating air emission controls in accordance with the requirements of an applicable regulation codified under the Utah Air Conservation Act.

(2) Identification of the specific requirements codified under the Utah Air Conservation Act with which the waste management unit is in compliance.

R315-264-1090. Reporting Requirements.

(a) Each owner or operator managing hazardous waste in a tank, surface impoundment, or container exempted from using air emission controls under the provisions of Subsection R315-264-1082(c) shall report to the Director each occurrence when hazardous waste is placed in the waste management unit in noncompliance with the conditions specified in Subsection R315-264-1082(c)(1) or (c)(2), as applicable. Examples of such occurrences include placing in the waste management unit a hazardous waste having an average VO concentration equal to or greater than 500 ppmw at the point of waste origination; or placing in the waste management unit a treated hazardous waste of which the organic content has been reduced by an organic destruction or removal process that fails to achieve the applicable conditions specified in Subsections R315-264-1082(c)(2)(i) through (c)(2)(vi). The owner or operator shall submit a written report within 15 calendar days of the time that the owner or operator becomes aware of the occurrence. The written report shall contain the EPA identification number, facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent recurrence of the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

(b) Each owner or operator using air emission controls on a tank in accordance with the requirements Subsection R315-264-1084(c) shall report to the Director each occurrence when hazardous waste is managed in the tank in noncompliance with the conditions specified in Subsection R315-264-1084(b). The

owner or operator shall submit a written report within 15 calendar days of the time that the owner or operator becomes aware of the occurrence. The written report shall contain the EPA identification number, facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent recurrence of the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

(c) Each owner or operator using a control device in accordance with the requirements of Section R315-264-1087 shall submit a semiannual written report to the Director excepted as provided for in Subsection R315-264-1090(d). The report shall describe each occurrence during the previous 6-month period when either:

(1) A control device is operated continuously for 24 hours or longer in noncompliance with the applicable operating values defined in Subsection R315-264-1035(c)(4); or

(2) A flare is operated with visible emissions for 5 minutes or longer in a two-hour period, as defined in Subsection R315-264-1033(d). The written report shall include the EPA identification number, facility name and address, and an explanation why the control device could not be returned to compliance within 24 hours, and actions taken to correct the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

(d) A report to the Director in accordance with the requirements of Subsection R315-264-1090(c) is not required for a 6-month period during which all control devices subject to Section R316-264-1080 through 1090 are operated by the owner or operator such that:

(1) During no period of 24 hours or longer did a control device operate continuously in noncompliance with the applicable operating values defined in Subsection R315-264-1035(c)(4); and

(2) No flare was operated with visible emissions for 5 minutes or longer in a two-hour period, as defined in Subsection R315-264-1033(d).

R315-264-1100. Containment Buildings -- Applicability.

The requirements of Sections R315-264-1100 through 1102 apply to owners or operators who store or treat hazardous waste in units designed and operated under Section R315-264-1101. The owner or operator is not subject to the definition of land disposal in RCRA section 3004(k) provided that the unit:

(a) Is a completely enclosed, self-supporting structure that is designed and constructed of manmade materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed; climatic conditions; and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls;

(b) Has a primary barrier that is designed to be sufficiently durable to withstand the movement of personnel, wastes, and handling equipment within the unit;

(c) If the unit is used to manage liquids, has:

(1) A primary barrier designed and constructed of materials to prevent migration of hazardous constituents into the barrier;

(2) A liquid collection system designed and constructed of materials to minimize the accumulation of liquid on the primary barrier; and

(3) A secondary containment system designed and constructed of materials to prevent migration of hazardous constituents into the barrier, with a leak detection and liquid collection system capable of detecting, collecting, and removing

leaks of hazardous constituents at the earliest practicable time, unless the unit has been granted a variance from the secondary containment system requirements under Subsection R315-264-1101(b)(4);

(d) Has controls sufficient to prevent fugitive dust emissions to meet the no visible emission standard in Subsection R315-264-1101(c)(1)(iv); and

(e) Is designed and operated to ensure containment and prevent the tracking of materials from the unit by personnel or equipment.

R315-264-1101. Design and Operating Standards.

(a) All containment buildings shall comply with the following design standards:

(1) The containment building shall be completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, e.g., precipitation, wind, run-on, and to assure containment of managed wastes.

(2) The floor and containment walls of the unit, including the secondary containment system if required under Subsection R315-264-1101(b), shall be designed and constructed of materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed; climatic conditions; and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls. The unit shall be designed so that it has sufficient structural strength to prevent collapse or other failure. All surfaces to be in contact with hazardous wastes shall be chemically compatible with those wastes. The Director shall consider standards established by professional organizations generally recognized by the industry such as the American Concrete Institute (ACI) and the American Society of Testing Materials (ASTM) in judging the structural integrity requirements of Subsection R315-264-1101(a). If appropriate to the nature of the waste management operation to take place in the unit, an exception to the structural strength requirement may be made for light-weight doors and windows that meet these criteria:

(i) They provide an effective barrier against fugitive dust emissions under Subsection R315-264-1101(c)(1)(iv); and

(ii) The unit is designed and operated in a fashion that assures that wastes will not actually come in contact with these openings.

(3) Incompatible hazardous wastes or treatment reagents shall not be placed in the unit or its secondary containment system if they could cause the unit or secondary containment system to leak, corrode, or otherwise fail.

(4) A containment building shall have a primary barrier designed to withstand the movement of personnel, waste, and handling equipment in the unit during the operating life of the unit and appropriate for the physical and chemical characteristics of the waste to be managed.

(b) For a containment building used to manage hazardous wastes containing free liquids or treated with free liquids, the presence of which is determined by the paint filter test, a visual examination, or other appropriate means, the owner or operator shall include:

(1) A primary barrier designed and constructed of materials to prevent the migration of hazardous constituents into the barrier, e.g., a geomembrane covered by a concrete wear surface.

(2) A liquid collection and removal system to minimize the accumulation of liquid on the primary barrier of the containment building:

(i) The primary barrier shall be sloped to drain liquids to the associated collection system; and

(ii) Liquids and waste shall be collected and removed to minimize hydraulic head on the containment system at the earliest practicable time.

(3) A secondary containment system including a secondary barrier designed and constructed to prevent migration of hazardous constituents into the barrier, and a leak detection system that is capable of detecting failure of the primary barrier and collecting accumulated hazardous wastes and liquids at the earliest practicable time.

(i) The requirements of the leak detection component of the secondary containment system are satisfied by installation of a system that is, at a minimum:

(A) Constructed with a bottom slope of 1 percent or more; and

(B) Constructed of a granular drainage material with a hydraulic conductivity of 1×10^{-2} cm/sec or more and a thickness of 30.5 cm (12 inches) or more, or constructed of synthetic or geonet drainage materials with a transmissivity of 3×10^{-5} m²/sec or more.

(ii) If treatment is to be conducted in the building, an area in which such treatment will be conducted shall be designed to prevent the release of liquids, wet materials, or liquid aerosols to other portions of the building.

(iii) The secondary containment system shall be constructed of materials that are chemically resistant to the waste and liquids managed in the containment building and of sufficient strength and thickness to prevent collapse under the pressure exerted by overlaying materials and by any equipment used in the containment building. Containment buildings can serve as secondary containment systems for tanks placed within the building under certain conditions. A containment building can serve as an external liner system for a tank, provided it meets the requirements of Subsection R315-264-193(e)(1). In addition, the containment building shall meet the requirements of Subsections R315-264-193(b) and 193(c)(1) and (2) to be considered an acceptable secondary containment system for a tank.

(4) For existing units other than 90-day generator units, the Director may delay the secondary containment requirement for up to two years, based on a demonstration by the owner or operator that the unit substantially meets the standards of Sections R315-264-1100 and 1102. In making this demonstration, the owner or operator shall:

(i) Provide written notice to the Director of their request by November 16, 1992. This notification shall describe the unit and its operating practices with specific reference to the performance of existing containment systems, and specific plans for retrofitting the unit with secondary containment;

(ii) Respond to any comments from the Director on these plans within 30 days; and

(iii) Fulfill the terms of the revised plans, if such plans are approved by the Director.

(c) Owners or operators of all containment buildings shall:

(1) Use controls and practices to ensure containment of the hazardous waste within the unit; and, at a minimum:

(i) Maintain the primary barrier to be free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier;

(ii) Maintain the level of the stored/treated hazardous waste within the containment walls of the unit so that the height of any containment wall is not exceeded;

(iii) Take measures to prevent the tracking of hazardous waste out of the unit by personnel or by equipment used in handling the waste. An area shall be designated to decontaminate equipment and any rinsate shall be collected and properly managed; and

(iv) Take measures to control fugitive dust emissions such that any openings, doors, windows, vents, cracks, etc., exhibit no visible emissions, see 40 CFR part 60, appendix A, Method

22-Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares. In addition, all associated particulate collection devices, e.g., fabric filter, electrostatic precipitator, shall be operated and maintained with sound air pollution control practices, see 40 CFR part 60 subpart 292 for guidance. This state of no visible emissions shall be maintained effectively at all times during routine operating and maintenance conditions, including when vehicles and personnel are entering and exiting the unit.

(2) Obtain and keep on-site a certification by a qualified Professional Engineer that the containment building design meets the requirements of Subsections R315-264-1101(a), (b), and (c).

(3) Throughout the active life of the containment building, if the owner or operator detects a condition that could lead to or has caused a release of hazardous waste, the owner or operator shall repair the condition promptly, in accordance with the following procedures.

(i) Upon detection of a condition that has led to a release of hazardous waste, e.g., upon detection of leakage from the primary barrier, the owner or operator shall:

(A) Enter a record of the discovery in the facility operating record;

(B) Immediately remove the portion of the containment building affected by the condition from service;

(C) Determine what steps shall be taken to repair the containment building, remove any leakage from the secondary collection system, and establish a schedule for accomplishing the cleanup and repairs; and

(D) Within 7 days after the discovery of the condition, notify the Director of the condition, and within 14 working days, provide a written notice to the Director with a description of the steps taken to repair the containment building, and the schedule for accomplishing the work.

(ii) The Director shall review the information submitted, make a determination regarding whether the containment building shall be removed from service completely or partially until repairs and cleanup are complete, and notify the owner or operator of the determination and the underlying rationale in writing.

(iii) Upon completing all repairs and cleanup the owner or operator shall notify the Director in writing and provide a verification, signed by a qualified, registered professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with Subsection R315-264-1101(c)(3)(i)(D).

(4) Inspect and record in the facility's operating record, at least once every seven days, data gathered from monitoring and leak detection equipment as well as the containment building and the area immediately surrounding the containment building to detect signs of releases of hazardous waste.

(d) For a containment building that contains both areas with and without secondary containment, the owner or operator shall:

(1) Design and operate each area in accordance with the requirements enumerated in Subsections R315-264-1101(a) through (c);

(2) Take measures to prevent the release of liquids or wet materials into areas without secondary containment; and

(3) Maintain in the facility's operating log a written description of the operating procedures used to maintain the integrity of areas without secondary containment.

(e) Notwithstanding any other provision of Subsection R315-264-1100 through 1102 the Director may waive requirements for secondary containment for a permitted containment building where the owner operator demonstrates that the only free liquids in the unit are limited amounts of dust suppression liquids required to meet occupational health and safety requirements, and where containment of managed wastes

and liquids can be assured without a secondary containment system.

R315-264-1102. Closure and Post-Closure Care.

(a) At closure of a containment building, the owner or operator shall remove or decontaminate all waste residues, contaminated containment system components, liners, etc.; contaminated subsoils; and structures and equipment contaminated with waste and leachate; and manage them as hazardous waste unless Subsection R315-261-3(d) applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for containment buildings shall meet all of the requirements specified in Sections R315-264-110 through 120 and 140 through 151.

(b) If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in Subsection R315-264-1102(a), the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he shall close the facility and perform post-closure care in accordance with the closure and post-closure requirements that apply to landfills, Section R315-264-310. In addition, for the purposes of closure, post-closure, and financial responsibility, such a containment building is then considered to be a landfill, and the owner or operator shall meet all of the requirements for landfills specified in Sections R315-264-110 through 120 and 140 through 151.

R315-264-1103. Appendix I to Rule R315-264 -- Recordkeeping Instructions.

The recordkeeping provisions of Section R315-264-73 specify that an owner or operator shall keep a written operating record at his facility. This appendix provides additional instructions for keeping portions of the operating record. See Subsection R315-264-73(b) for additional recordkeeping requirements.

The following information shall be recorded, as it becomes available, and maintained in the operating record until closure of the facility in the following manner:

Records of each hazardous waste received, treated, stored, or disposed of at the facility which include the following:

(1) A description by its common name and the EPA Hazardous Waste Number(s) from Rule R315-261 which apply to the waste. The waste description also shall include the waste's physical form, i.e., liquid, sludge, solid, or contained gas. If the waste is not listed in Sections R315-261-30 through 35, the description also shall include the process that produced it, for example, solid filter cake from production of ----, EPA Hazardous Waste Number W051.

Each hazardous waste listed in Sections R315-261-30 through 35, and each hazardous waste characteristic defined in Sections R315-261-20 through 24, has a four-digit EPA Hazardous Waste Number assigned to it. This number shall be used for recordkeeping and reporting purposes. Where a hazardous waste contains more than one listed hazardous waste, or where more than one hazardous waste characteristic applies to the waste, the waste description shall include all applicable EPA Hazardous Waste Numbers.

(2) The estimated or manifest-reported weight, or volume and density, where applicable, in one of the units of measure specified in Table 1;

Table 1

Unit of measure	Code(1)
Gallons	G
Gallons per Hour	E
Gallons per Day	U
Liters	L

Liters per Hour	H
Liters per Day	V
Short Tons per Hour	D
Metric Tons per Hour	W
Short Tons per Day	N
Metric Tons per Day	S
Pounds per Hour	J
Kilograms per Hour	R
Cubic Yards	Y
Cubic Meters	C
Acres	B
Acre-feet	A
Hectares	Q
Hectare-meter	F
Btu's per Hour	I
Pounds	P
Short tons	T
Kilograms	K
Tons	M

(1) Single digit symbols are used here for data processing purposes.

(3) The method(s), by handling code(s) as specified in Table 2, and date(s) of treatment, storage, or disposal.

Table 2
Handling Codes for Treatment, Storage and Disposal Methods

Enter the handling code(s) listed below that most closely represents the technique(s) used at the facility to treat, store or dispose of each quantity of hazardous waste received.

For Storage

Code	Storage type
S01	Container (barrel, drum, etc.)
S02	Tank
S03	Waste Pile
S04	Surface Impoundment
S05	Drip Pad
S06	Containment Building (Storage)
S99	Other Storage (specify)

For Treatment

(a) Thermal Treatment-

Code	Type of Thermal Treatment
T06	Liquid injection incinerator
T07	Rotary kiln incinerator
T08	Fluidized bed incinerator
T09	Multiple hearth incinerator
T10	Infrared furnace incinerator
T11	Molten salt destructor
T12	Pyrolysis
T13	Wet air oxidation
T14	Calcination
T15	Microwave discharge
T18	Other (specify)

(b) Chemical Treatment-

Code	Type of Chemical Treatment
T19	Absorption mound
T20	Absorption field
T21	Chemical fixation
T22	Chemical oxidation
T23	Chemical precipitation
T24	Chemical reduction
T25	Chlorination
T26	Chlorinolysis
T27	Cyanide destruction
T28	Degradation
T29	Detoxification
T30	Ion exchange
T31	Neutralization
T32	Ozonation
T33	Photolysis
T34	Other (specify)

(c) Physical Treatment-

(1) Separation of components:

Code	Type of Separation treatment
T35	Centrifugation
T36	Clarification
T37	Coagulation
T38	Decanting
T39	Encapsulation
T40	Filtration

T41	Flocculation
T42	Flotation
T43	Foaming
T44	Sedimentation
T45	Thickening
T46	Ultrafiltration
T47	Other (specify)
(2) Removal of Specific Components:	
Code	Type of Removal Treatment
T48	Absorption-molecular sieve
T49	Activated carbon
T50	Blending
T51	Catalysis
T52	Crystallization
T53	Dialysis
T54	Distillation
T55	Electrodialysis
T56	Electrolysis
T57	Evaporation
T58	High gradient magnetic separation
T59	Leaching
T60	Liquid ion exchange
T61	Liquid-liquid extraction
T62	Reverse osmosis
T63	Solvent recovery
T64	Stripping
T65	Sand filter
T66	Other (specify)

(d) Biological Treatment

Code	Type of Biological Treatment
T67	Activated sludge
T68	Aerobic lagoon
T69	Aerobic tank
T70	Anaerobic tank
T71	Composting
T72	Septic tank
T73	Spray irrigation
T74	Thickening filter
T75	Trickling filter
T76	Waste stabilization pond
T77	Other (specify)

(e) Boilers and Industrial Furnaces

Code	Type of Boiler or Industrial Furnace
T80	Boiler
T81	Cement Kiln
T82	Lime Kiln
T83	Aggregate Kiln
T84	Phosphate Kiln
T85	Coke Oven
T86	Blast Furnace
T87	Smelting, Melting, or Refining Furnace
T88	Titanium Dioxide Chloride Process Oxidation Reactor
T89	Methane Reforming Furnace
T90	Pulping Liquor Recovery Furnace
T91	Combustion Device Used in the Recovery of Sulfur Values from Spent Sulfuric Acid
T92	Halogen Acid Furnaces
T93	Other Industrial Furnaces Listed in Section R315-260.10 (specify)

(f) Other Treatment

Code	Other type of Treatment
T94	Containment Building (Treatment)

For Disposal

Code	Type of Disposal
D79	Underground Injection
D80	Landfill
D81	Land Treatment
D82	Ocean Disposal
D83	Surface Impoundment (to be closed as a landfill)
D99	Other Disposal (specify)

For Miscellaneous Sections R315-264-600 through 603 Units

Code	Unit type
X01	Open Burning/Open Detonation
X02	Mechanical Processing
X03	Thermal Unit
X04	Geologic Repository
X99	Other Sections R315-264-600 through 603 Units (specify)

R315-264-1104. Appendix IV to Rule R315-264-Cochran's Approximation to the Behrens-Fisher Students' t-test.
40 CFR 264 Appendix IV, 2015 edition, is adopted and incorporated by reference.

R315-264-1105. Appendix V to Rule R315-264 -- Examples of Potentially Incompatible Waste.

Many hazardous wastes, when mixed with other waste or materials at a hazardous waste facility, can produce effects which are harmful to human health and the environment, such as (1) heat or pressure, (2) fire or explosion, (3) violent reaction, (4) toxic dusts, mists, fumes, or gases, or (5) flammable fumes or gases.

Below are examples of potentially incompatible wastes, waste components, and materials, along with the harmful consequences which result from mixing materials in one group with materials in another group. The list is intended as a guide to owners or operators of treatment, storage, and disposal facilities, and to enforcement and permit granting officials, to indicate the need for special precautions when managing these potentially incompatible waste materials or components.

This list is not intended to be exhaustive. An owner or operator shall, as the regulations require, adequately analyze his wastes so that he can avoid creating uncontrolled substances or reactions of the type listed below, whether they are listed below or not.

It is possible for potentially incompatible wastes to be mixed in a way that precludes a reaction, e.g., adding acid to water rather than water to acid, or that neutralizes them, e.g., a strong acid mixed with a strong base, or that controls substances produced, e.g., by generating flammable gases in a closed tank equipped so that ignition cannot occur, and burning the gases in an incinerator.

In the lists below, the mixing of a Group A material with a Group B material may have the potential consequence as noted.

Table	
Group 1-A	
Acetylene sludge	
Alkaline caustic liquids	
Alkaline cleaner	
Alkaline corrosive liquids	
Alkaline corrosive battery fluid	
Caustic wastewater	
Lime sludge and other corrosive alkalis	
Lime wastewaterLime and water	
Spent caustic	
Group 1-B	
Acid sludge	
Acid and water	
Battery acid	
Chemical cleaners	
Electrolyte, acid	
Etching acid liquid or solvent	
Pickling liquor and other corrosive acids	
Spent acid	
Spent mixed acid	
Spent sulfuric acid	
Potential consequences: Heat generation; violent reaction.	
Group 2-A	
Aluminum	
Beryllium	
Calcium	
Lithium	
Magnesium	
Potassium	
Sodium	
Zinc powder	
Other reactive metals and metal hydrides	
Group 2-B	
Any waste in Group 1-A or 1-B	
Potential consequences: Fire or explosion; generation of flammable hydrogen gas.	
Group 3-A	

Alcohols	
Water	
Group 3-B	
Any concentrated waste in Groups 1-A or 1-B	
Calcium	
Lithium	
Metal hydrides	
Potassium	
SO2 Cl2, SOCl2, PCl3, CH3 SiCl3	
Other water-reactive waste	
Potential consequences: Fire, explosion, or heat generation; generation of flammable or toxic gases.	
Group 4-A	
Alcohols	
Aldehydes	
Halogenated hydrocarbons	
Nitrated hydrocarbons	
Unsaturated hydrocarbons	
Other reactive organic compounds and solvents	
Group 4-B	
Concentrated Group 1-A or 1-B wastes	
Group 2-A wastes	
Potential consequences: Fire, explosion, or violent reaction.	
Group 5-A	
Spent cyanide and sulfide solutions	
Group 5-B	
Group 1-B wastes	
Potential consequences: Generation of toxic hydrogen cyanide or hydrogen sulfide gas.	
Group 6-A	
Chlorates	
Chlorine	
Chlorites	
Chromic acid	
Hypochlorites	
Nitrates	
Nitric acid, fuming	
Perchlorates	
Permanganates	
Peroxides	
Other strong oxidizers	
Group 6-B	
Acetic acid and other organic acids	
Concentrated mineral acids	
Group 2-A wastes	
Group 4-A wastes	
Other flammable and combustible wastes	
Potential consequences: Fire, explosion, or violent reaction.	
Source: "Law, Regulations, and Guidelines for Handling of Hazardous Waste." California Department of Health, February 1975.	
(1) These include counties, city-county consolidations, and independent cities. In the case of Alaska, the political jurisdictions are election districts, and, in the case of Hawaii, the political jurisdiction listed is the island of Hawaii.	
R315-264-1106. Appendix VI to Rule R315-264 -- Political Jurisdictions within Utah in Which Compliance With Subsection R315-264-18(a) Shall Be Demonstrated.	
Beaver	
Box Elder	
Cache	
Carbon	
Daggett	
Davis	
Duchesne	
Emery	
Garfield	
Grand	
Iron	
Juab	

Kane
 Millard
 Morgan
 Piute
 Rich
 Salt Lake
 San Juan
 Sanpete
 Sevier
 Summit
 Tooele
 Uintah
 Utah
 Wasatch
 Washington
 Wayne
 Weber

R315-264-1107. Appendix IX to Rule R315-264 -- Ground-Water Monitoring List.

40 CFR 264 Appendix IX, 2015 edition, is adopted and incorporated by reference.

**KEY: hazardous waste
 April 15, 2016**

**19-6-105
 19-6-106**

R315. Environmental Quality, Waste Management and Radiation Control, Waste Management.

R315-265. Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities.

R315-265-1. Incorporation.

40 CFR 265, 2015 edition, is adopted and incorporated by reference with the following exceptions:

(a) Substitute "Director" for all references to "Regional Administrator:"

(b) Substitute "Director" or "Board" for EPA as appropriate except for references to "EPA identification number and where EPA is used in reference to actions under 40 CFR 268.42(b) and in 265.71(a)(3);

(c) Substitute "Utah Division of Waste Management and Radiation Control " or "Director" as appropriate for "Environmental Protection Agency;" and

(d) The language that reads "If the facilities covered by the mechanism are in more than one Region, identical evidence of financial assurance must be submitted to and maintained with the Regional Administrators of all such Regions" in 40 CFR 265.143(g) and 256.145(g) is changed to read as follows: If the facilities covered by the mechanism are in more than one State, identical evidence of financial assurance must be submitted to the Director as is submitted to all other states and to all appropriate EPA Regional Administrators.

(e) Add, following December 6, 1990, in 40 CFR 265.440(a), "for all HSWA drip pads or January 31, 1992 for all non-HSWA drip pads."

(f) Add, following December 24, 1992, in 40 CFR 265-440(a), "for all HSWA drip pads or July 30, 1993 for all non-HSWA drip pads."

**KEY: hazardous waste
 April 15, 2016**

**19-6-105
 19-6-106**

R315. Environmental Quality, Waste Management and Radiation Control, Waste Management.

R315-266. Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities.

R315-266-20. Recyclable Materials Used in a Manner Constituting Disposal -- Applicability.

(a) The regulations of Sections R315-266-20 through 23 apply to recyclable materials that are applied to or placed on the land:

- (1) Without mixing with any other substance(s); or
- (2) After mixing or combination with any other substance(s). These materials shall be referred to throughout Sections R315-266-20 through 23 as "materials used in a manner that constitutes disposal."

(b) Products produced for the general public's use that are used in a manner that constitutes disposal and that contain recyclable materials are not presently subject to regulation if the recyclable materials have undergone a chemical reaction in the course of producing the products so as to become inseparable by physical means and if such products meet the applicable treatment standards in Sections R315-268-40 through 49, or applicable prohibition levels in Section R315-268-32 or RCRA section 3004(d), where no treatment standards have been established, for each recyclable material, i.e., hazardous waste, that they contain, and the recycler complies with Subsection R315-268-7(b)(6).

(c) Anti-skid/deicing uses of slags, which are generated from high temperature metals recovery (HTMR) processing of hazardous waste K061, K062, and F006, in a manner constituting disposal are not covered by the exemption in Subsection R315-266-20(b) and remain subject to regulation.

(d) Fertilizers that contain recyclable materials are not subject to regulation provided that:

- (1) They are zinc fertilizers excluded from the definition of solid waste according to Subsection R315-261-4(a)(21); or
- (2) They meet the applicable treatment standards in Sections R315-268-40 through 49 for each hazardous waste that they contain.

R315-266-21. Recyclable Materials Used in a Manner Constituting Disposal -- Standards Applicable to Generators and Transporters of Materials Used in a Manner That Constitutes Disposal.

Generators and transporters of materials that are used in a manner that constitutes disposal are subject to the applicable requirements of Rules R315-262 and 263, and the notification requirement under section 3010 of RCRA.

R315-266-22. Recyclable Materials Used in a Manner Constituting Disposal -- Standards Applicable to Stors of Materials That Are to Be Used in a Manner That Constitutes Disposal Who Are Not the Ultimate Users.

Owners or operators of facilities that store recyclable materials that are to be used in a manner that constitutes disposal, but who are not the ultimate users of the materials, are regulated under all applicable provisions of Sections R315-264-1 through 259; 40 CFR 265.1 through 260, which are adopted by reference; and Rules R315-270 and 124 and the notification requirement under section 3010 of RCRA.

R315-266-23. Recyclable Materials Used in a Manner Constituting Disposal -- Standards Applicable to Users of Materials That Are Used in a Manner That Constitutes Disposal.

(a) Owners or operators of facilities that use recyclable materials in a manner that constitutes disposal are regulated under all applicable provisions of Rules R315-124, 264, 265, 268, and 270 and the notification requirement under section

3010 of RCRA. These requirements do not apply to products which contain these recyclable materials under the provisions of Subsection R315-266-20(b).

(b) The use of waste or used oil or other material, which is contaminated with dioxin or any other hazardous waste, other than a waste identified solely on the basis of ignitability, for dust suppression or road treatment is prohibited.

R315-266-70. Recyclable Materials Utilized for Precious Metal Recovery -- Applicability and Requirements.

(a) The regulations of Section R315-266-70 apply to recyclable materials that are reclaimed to recover economically significant amounts of gold, silver, platinum, palladium, iridium, osmium, rhodium, ruthenium, or any combination of these.

(b) Persons who generate, transport, or store recyclable materials that are regulated under Section R315-266-70 are subject to the following requirements:

(1) Notification requirements under section 3010 of RCRA;

(2) Sections R315-262-20 through 27, for generators; Sections R315-263-20 and 21, for transporters; and 40 CFR 265.71 and 72, which are adopted by reference, for persons who store; and

(3) For precious metals exported to or imported from designated OECD member countries for recovery, Sections R315-262-80 through 89 and 40 CFR 265.12(a)(2), which is adopted by reference. For precious metals exported to or imported from non-OECD countries for recovery, Sections R315-262-50 through 58 and 60.

(c) Persons who store recycled materials that are regulated under Section R315-266-70 shall keep the following records to document that they are not accumulating these materials speculatively, as defined in Subsection R315-261-1(c);

(1) Records showing the volume of these materials stored at the beginning of the calendar year;

(2) The amount of these materials generated or received during the calendar year; and

(3) The amount of materials remaining at the end of the calendar year.

(d) Recyclable materials that are regulated under Section R315-266-70 that are accumulated speculatively, as defined in Subsection R315-261-1(c), are subject to all applicable provisions of Rules R315-262 through 265, 270, and 124.

R315-266-80. Spent Lead-Acid Batteries Being Reclaimed -- Applicability and Requirements.

(a) Are spent lead-acid batteries exempt from hazardous waste management requirements? If you generate, collect, transport, store, or regenerate lead-acid batteries for reclamation purposes, you may be exempt from certain hazardous waste management requirements. Use Subsections R315-266-80(a)(1) through (7) to determine which requirements apply to you. Alternatively, you may choose to manage your spent lead-acid batteries under the "Universal Waste" rule in Rule R315-273.

(1) If your batteries will be reclaimed through regeneration, such as by electrolyte replacement, then you are exempt from Rules R315-262, except for Section R315-262-11; 263; 264; 265; 266; 268; 270; and 124, and the notification requirements at section 3010 of RCRA and you are subject to Rule R315-261 and Section R315-262-11.

(2) If your batteries will be reclaimed other than through regeneration and if you generate, collect, and/or transport these batteries then you are exempt from Rule R315-262, except for Section R315-262-11; 263; 264; 265; 266; 270; and 124, and the notification requirements at section 3010 of RCRA and you are subject to Rule R315-261 and Section R315-262-11, and applicable provisions under Rule R315-268.

(3) If your batteries will be reclaimed other than through

regeneration and if you store these batteries but you aren't the reclaimer then you are exempt from Rule R315-262, except for Section R315-262-11; 263; 264; 265; 266; 270; and 124, and the notification requirements at section 3010 of RCRA and you are subject to Rule R315-261 and Section R315-262-11, and applicable provisions under Rule R315-268.

(4) If your batteries will be reclaimed other than through regeneration and if you store these batteries before you reclaim them then you shall comply with Subsection R315-266-80(b) and as appropriate other regulatory provisions described in Subsection R315-266-80(b) and you are subject to Rule R315-261 and Section R315-262-11, and applicable provisions under Rule R315-268.

(5) If your batteries will be reclaimed other than through regeneration and if you don't store these batteries before you reclaim them then you are exempt from Rule R315-262, except for Section R315-262-11; 263; 264; 265; 266; 270; and 124, and the notification requirements at section 3010 of RCRA and you are subject to Rule R315-261 and Section R315-262-11, and applicable provisions under Rule R315-268.

(6) If your batteries will be reclaimed through regeneration or any other means and if you export these batteries for reclamation in a foreign country the you are exempt from Rules R315-263, 264, 265, 266, 268, 270, 124, and the notification requirements at section 3010 of RCRA. You are also exempt from Rule R315-262, except for Section R315-262-11, and except for the applicable requirements in either: Sections R315-262-80 through 89; or Section R315-262-53 "Notification of Intent to Export, Subsection R315-262-56(a)(1) through (4)(6) and (b) "Annual Reports," and Section R315-262-57 "Recordkeeping" and you are subject to Rule R315-261 and Section R315-262-11, and either shall comply with Sections R315-262-80 through 89, if shipping to one of the OECD countries specified in Subsection R315-262-58(a)(1), or shall:

(i) Comply with the requirements applicable to a primary exporter in Subsections R315-262-53, 56(a)(1) through (4), (6), and (b) and Section R315-262-57; and

(ii) Export these batteries only upon consent of the receiving country and in conformance with the EPA Acknowledgement of Consent as defined in Sections R315-262-50 through 58; and

(iii) Provide a copy of the EPA Acknowledgment of Consent for the shipment to the transporter transporting the shipment for export.

(7) If your batteries will be reclaimed through regeneration or any other means and if you transport these batteries in the U.S. to export them for reclamation in a foreign country then you are exempt from Rules R315-263, 264, 265, 266, 268, 270, 124, and the notification requirements at section 3010 of RCRA and you shall comply with applicable requirements in Sections R315-262-80 through 89, if shipping to one of the OECD countries specified in Subsection R315-262-58(a)(1), or shall comply with the following:

(i) you may not accept a shipment if you know the shipment does not conform to the EPA Acknowledgment of Consent;

(ii) you shall ensure that a copy of the EPA Acknowledgment of Consent accompanies the shipment; and

(iii) you shall ensure that the shipment is delivered to the facility designated by the person initiating the shipment.

(b) If I store spent lead-acid batteries before I reclaim them but not through regeneration, which requirements apply? The requirements of Subsection R315-266-80(b) apply to you if you store spent lead-acid batteries before you reclaim them, but you don't reclaim them through regeneration. The requirements are slightly different depending on your permit status.

(1) For Interim Status Facilities, you shall comply with:

(i) Notification requirements under section 3010 of RCRA.

(ii) All applicable provisions in 40 CFR 265.1 through 4,

which are adopted by reference.

(iii) All applicable provisions in 40 CFR 265.10 through 19, which are adopted by reference, except 265.13, waste analysis.

(iv) All applicable provisions in 40 CFR 265.30 through 56, which is adopted by reference.

(v) All applicable provisions in 40 CFR 265.70 through 77, which are adopted by reference, except 265.71 and 72, dealing with the use of the manifest and manifest discrepancies.

(vi) All applicable provisions in 40 CFR 265.90 through 260, which are adopted by reference.

(vii) All applicable provisions in Rules R315-270 and 124.

(2) For Permitted Facilities:

(i) Notification requirements under section 3010 of RCRA.

(ii) All applicable provisions in Sections R315-264-1 through 4.

(iii) All applicable provisions in Sections R315-264-10 through 19, but not Section R315-264-13, waste analysis.

(iv) All applicable provisions in Sections R315-264-30 through 56.

(v) All applicable provisions in Sections R315-264-70 through 77, but not Sections R315-264-71 or 72, dealing with the use of the manifest and manifest discrepancies.

(vi) All applicable provisions in Sections R315-264-90 through 259.

(vii) All applicable provisions in Rules R315-270 and 124.

R315-266-100. Hazardous Waste Burned in Boilers and Industrial Furnaces -- Applicability.

(a) The regulations of Sections R315-266-100 through 112 apply to hazardous waste burned or processed in a boiler or industrial furnace, as defined in Section R315-260-10, irrespective of the purpose of burning or processing, except as provided by Subsections R315-266-100(b), (c), (d), (g), and (h). In Sections R315-266-100 through 112, the term "burn" means burning for energy recovery or destruction, or processing for materials recovery or as an ingredient. The emissions standards of Subsections R315-266-104, 105 through 107 apply to facilities operating under interim status or under a RCRA permit as specified in Subsections R315-266-102 and 103.

(b) Integration of the MACT standards.

(1) Except as provided by Subsections R315-266-100(b)(2), (b)(3), and (b)(4), the standards of Rule R315-266 do not apply to a new hazardous waste boiler or industrial furnace unit that becomes subject to RCRA permit requirements after October 12, 2005; or no longer apply when an owner or operator of an existing hazardous waste boiler or industrial furnace unit demonstrates compliance with the maximum achievable control technology (MACT) requirements of Subsection R307-214-2(39), which incorporates 40 CFR 63, subpart EEE, by conducting a comprehensive performance test and submitting to the Director a Notification of Compliance under 40 CFR 63.1207(j) and 63.1210(d), which are incorporated by Subsection R307-214-2(29), documenting compliance with the requirements of Subsection R307-214-2(29), which incorporates 40 CFR 63, subpart EEE. Nevertheless, even after this demonstration of compliance with the MACT standards, RCRA permit conditions that were based on the standards of Rule R315-266 shall continue to be in effect until they are removed from the permit or the permit is terminated or revoked, unless the permit expressly provides otherwise.

(2) The following standards continue to apply:

(i) If you elect to comply with Subsection R315-270-235(a)(1)(i) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events, Subsection R315-266-102(e)(1) requiring operations in accordance with the operating requirements specified in the permit at all times that

hazardous waste is in the unit, and Subsection R315-266-102(e)(2)(iii) requiring compliance with the emission standards and operating requirements during startup and shutdown if hazardous waste is in the combustion chamber, except for particular hazardous wastes. These provisions apply only during startup, shutdown, and malfunction events;

(ii) The closure requirements of Subsections R315-266-102(e)(11) and 103(l);

(iii) The standards for direct transfer of Section R315-266-111;

(iv) The standards for regulation of residues of Section R315-266-112; and

(v) The applicable requirements of Sections R315-264-1 through 151, 1050 through 1065 and 1080 through 1090 and 40 CFR 265.1 through 150, 1050 through 1064, and 1080 through 1090, which are adopted by reference.

(3) If you own or operate a boiler or hydrochloric acid production furnace that is an area source under 40 CFR 63.2 and you elect not to comply with the emission standards under 40 CFR 63.1216, 63.1217, and 63.1218 for particulate matter, semivolatile and low volatile metals, and total chlorine, you also remain subject to:

(i) Section R315-266-105-Standards to control particulate matter;

(ii) Section R315-266-106-Standards to control metals emissions, except for mercury; and

(iii) Section R315-266-107-Standards to control hydrogen chloride and chlorine gas.

(4) The particulate matter standard of Section R315-266-105 remains in effect for boilers that elect to comply with the alternative to the particulate matter standard under 40 CFR 63.1216(e) and 63.1217(e).

(c) The following hazardous wastes and facilities are not subject to regulation under Sections R315-266-100 through 112:

(1) Used oil burned for energy recovery that is also a hazardous waste solely because it exhibits a characteristic of hazardous waste identified in Sections R315-261-20 through 24. Such used oil is subject to regulation under Rule R315-15;

(2) Gas recovered from hazardous or solid waste landfills when such gas is burned for energy recovery;

(3) Hazardous wastes that are exempt from regulation under Section R315-261-4 and Subsections R315-261-6(a)(3)(iii) and (iv), and hazardous wastes that are subject to the special requirements for conditionally exempt small quantity generators under Section R315-261-5; and

(4) Coke ovens, if the only hazardous waste burned is EPA Hazardous Waste No. K087, decanter tank tar sludge from coking operations.

(d) Owners and operators of smelting, melting, and refining furnaces, including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces, but not including cement kilns, aggregate kilns, or halogen acid furnaces burning hazardous waste, that process hazardous waste solely for metal recovery are conditionally exempt from regulation under Sections R315-266-100 through 112, except for Sections R315-266-101 and 266-112.

(1) To be exempt from Sections R315-266-102 through 111, an owner or operator of a metal recovery furnace or mercury recovery furnace shall comply with the following requirements, except that an owner or operator of a lead or a nickel-chromium recovery furnace, or a metal recovery furnace that burns baghouse bags used to capture metallic dusts emitted by steel manufacturing, shall comply with the requirements of Subsection R315-266-100(d)(3), and owners or operators of lead recovery furnaces that are subject to regulation under the Secondary Lead Smelting NESHAP shall comply with the requirements of Subsection R315-266-100(h).

(i) Provide a one-time written notice to the Director indicating the following:

(A) The owner or operator claims exemption under Subsection R315-266-100(d);

(B) The hazardous waste is burned solely for metal recovery consistent with the provisions of Subsection R315-266-100(d)(2);

(C) The hazardous waste contains recoverable levels of metals; and

(D) The owner or operator shall comply with the sampling and analysis and recordkeeping requirements of Subsection R315-266-100(d);

(ii) Sample and analyze the hazardous waste and other feedstocks as necessary to comply with the requirements of Subsection R315-266-100(d) by using appropriate methods; and

(iii) Maintain at the facility for at least three years records to document compliance with the provisions of Subsection R315-266-100(d) including limits on levels of toxic organic constituents and Btu value of the waste, and levels of recoverable metals in the hazardous waste compared to normal nonhazardous waste feedstocks.

(2) A hazardous waste meeting either of the following criteria is not processed solely for metal recovery:

(i) The hazardous waste has a total concentration of organic compounds listed in Rule R315-261, appendix VIII, exceeding 500 ppm by weight, as-fired, and so is considered to be burned for destruction. The concentration of organic compounds in a waste as-generated may be reduced to the 500 ppm limit by bona fide treatment that removes or destroys organic constituents. Blending for dilution to meet the 500 ppm limit is prohibited and documentation that the waste has not been impermissibly diluted shall be retained in the records required by Subsection R315-266-100(d)(1)(iii); or

(ii) The hazardous waste has a heating value of 5,000 Btu/lb or more, as-fired, and so is considered to be burned as fuel. The heating value of a waste as-generated may be reduced to below the 5,000 Btu/lb limit by bona fide treatment that removes or destroys organic constituents. Blending for dilution to meet the 5,000 Btu/lb limit is prohibited and documentation that the waste has not been impermissibly diluted shall be retained in the records required by Subsection R315-266-100(d)(1)(iii).

(3) To be exempt from Sections R315-266-102 through 111, an owner or operator of a lead or nickel-chromium or mercury recovery furnace, except for owners or operators of lead recovery furnaces subject to regulation under the Secondary Lead Smelting NESHAP, or a metal recovery furnace that burns baghouse bags used to capture metallic dusts emitted by steel manufacturing, shall provide a one-time written notice to the Director identifying each hazardous waste burned and specifying whether the owner or operator claims an exemption for each waste under Subsection R315-266-100(d)(3) or Subsection R315-266-100(d)(1). The owners or operator shall comply with the requirements of Subsection R315-266-100(d)(1) for those wastes claimed to be exempt under Subsection R315-266-100(d)(1) and shall comply with the requirements below for those wastes claimed to be exempt under Subsection R315-266-100(d)(3).

(i) The hazardous wastes listed in appendices XI, XII, and XIII, of Rule R315-266, and baghouse bags used to capture metallic dusts emitted by steel manufacturing are exempt from the requirements of Subsection R315-266-100(d)(1), provided that:

(A) A waste listed in appendix XI of Rule R315-266 shall contain recoverable levels of lead, a waste listed in appendix XII of Rule R315-266 shall contain recoverable levels of nickel or chromium, a waste listed in appendix XIII of Rule R315-266 shall contain recoverable levels of mercury and contain less than 500 ppm of Rule R315-261, appendix VIII organic constituents, and baghouse bags used to capture metallic dusts emitted by steel manufacturing shall contain recoverable levels of metal;

and

(B) The waste does not exhibit the Toxicity Characteristic of Section R315-261-24 for an organic constituent; and

(C) The waste is not a hazardous waste listed in Sections R315-261-30 through 35 because it is listed for an organic constituent as identified in appendix VII of Rule R315-261; and

(D) The owner or operator certifies in the one-time notice that hazardous waste is burned under the provisions of Subsection R315-266-100(d)(3) and that sampling and analysis will be conducted or other information will be obtained as necessary to ensure continued compliance with these requirements. Sampling and analysis shall be conducted according to Subsection R315-266-100(d)(1)(ii) and records to document compliance with Subsection R315-266-100(d)(3) shall be kept for at least three years.

(ii) The Director may decide on a case-by-case basis that the toxic organic constituents in a material listed in appendix XI, XII, or XIII of Rule R315-266 that contains a total concentration of more than 500 ppm toxic organic compounds listed in appendix VIII, of Rule R315-261, may pose a hazard to human health and the environment when burned in a metal recovery furnace exempt from the requirements of Sections R315-266-100 through 112. In that situation, after adequate notice and opportunity for comment, the metal recovery furnace shall become subject to the requirements of Sections R315-266-100 through 112 when burning that material. In making the hazard determination, the Director shall consider the following factors:

(A) The concentration and toxicity of organic constituents in the material; and

(B) The level of destruction of toxic organic constituents provided by the furnace; and

(C) Whether the acceptable ambient levels established in appendices IV or V of Rule R315-266 may be exceeded for any toxic organic compound that may be emitted based on dispersion modeling to predict the maximum annual average off-site ground level concentration.

(e) The standards for direct transfer operations under Section R315-266-111 apply only to facilities subject to the permit standards of Section R315-266-102 or the interim status standards of Section R315-266-103.

(f) The management standards for residues under Section R315-266-112 apply to any boiler or industrial furnace burning hazardous waste.

(g) Owners and operators of smelting, melting, and refining furnaces, including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces, that process hazardous waste for recovery of economically significant amounts of the precious metals gold, silver, platinum, palladium, iridium, osmium, rhodium, or ruthenium, or any combination of these are conditionally exempt from regulation under Sections R315-266-100 through 111. To be exempt from Sections R315-266-101 through 111, an owner or operator shall:

(1) Provide a one-time written notice to the Director indicating the following:

(i) The owner or operator claims exemption under Subsection R315-266-100(g);

(ii) The hazardous waste is burned for legitimate recovery of precious metal; and

(iii) The owner or operator shall comply with the sampling and analysis and recordkeeping requirements of Subsection R315-266-100(g); and

(2) Sample and analyze the hazardous waste as necessary to document that the waste contains economically significant amounts of the metals and that the treatment recovers economically significant amounts of precious metal; and

(3) Maintain at the facility for at least three years records to document that all hazardous wastes burned are burned for

recovery of economically significant amounts of precious metal.

(h) Starting June 23, 1997, owners or operators of lead recovery furnaces that process hazardous waste for recovery of lead and that are subject to regulation under the Secondary Lead Smelting NESHAP, are conditionally exempt from regulation under Section R315-266-100 through 112, except for Subsection R315-266-101. To be exempt, an owner or operator shall provide a one-time notice to the Director identifying each hazardous waste burned and specifying that the owner or operator claims an exemption under Subsection R315-266-100(h). The notice also shall state that the waste burned has a total concentration of non-metal compounds listed in Rule R315-261, appendix VIII, of less than 500 ppm by weight, as fired and as provided in Subsection R315-266-100(d)(2)(i), or is listed in appendix XI to Rule R315-266.

R315-266-101. Hazardous Waste Burned in Boilers and Industrial Furnaces -- Management Prior to Burning.

(a) Generators. Generators of hazardous waste that is burned in a boiler or industrial furnace are subject to Rule R315-262.

(b) Transporters. Transporters of hazardous waste that is burned in a boiler or industrial furnace are subject to Rule R315-263.

(c) Storage and treatment facilities.

(1) Owners and operators of facilities that store or treat hazardous waste that is burned in a boiler or industrial furnace are subject to the applicable provisions of Rules R315-264, 265 and 270, except as provided by Subsection R315-266-101(c)(2). These standards apply to storage and treatment by the burner as well as to storage and treatment facilities operated by intermediaries, processors, blenders, distributors, etc., between the generator and the burner.

(2) Owners and operators of facilities that burn, in an onsite boiler or industrial furnace exempt from regulation under the small quantity burner provisions of Section R315-266-108, hazardous waste that they generate are exempt from the regulations of Rules R315-264, 265 and 270 applicable to storage units for those storage units that store mixtures of hazardous waste and the primary fuel to the boiler or industrial furnace in tanks that feed the fuel mixture directly to the burner. Storage of hazardous waste prior to mixing with the primary fuel is subject to regulation as prescribed in Subsection R315-266-101(c)(1).

R315-266-102. Hazardous Waste Burned in Boilers and Industrial Furnaces -- Permit Standards for Burners.

(a) Applicability

(1) General. Owners and operators of boilers and industrial furnaces burning hazardous waste and not operating under interim status shall comply with the requirements of Section R315-266-102 and Sections R315-270-22 and 66, unless exempt under the small quantity burner exemption of Subsections R315-266-108.

(2) Applicability of Rule R315-264 standards. Owners and operators of boilers and industrial furnaces that burn hazardous waste are subject to the following provisions of Rule R315-264, except as provided otherwise by Sections R315-266-100 through 112:

(i) Section R315-264-4, General;

(ii) Sections R315-264-11 through 18, General facility standards;

(iii) Sections R315-264-31 through 37, Preparedness and prevention;

(iv) Sections R315-264-51 through 56, Contingency plan and emergency procedures;

(v) The applicable provisions of Sections R315-264-71 through 77, Manifest system, recordkeeping, and reporting;

(vi) Sections R315-264-90 and 101, Releases from Solid

Waste Management Units;

(vii) Sections R315-264-111 through 115, Closure and post-closure;

(viii) Sections R315-264-141 through 143 and 147 through 151, Financial requirements; except that States and the Federal government are exempt from the requirements of Sections R315-264-140 through 151; and

(ix) Sections R315-264-1050 through 1065, Air emission standards for equipment leaks, except Subsections R315-264-1050(a).

(b) Hazardous waste analysis.

(1) The owner or operator shall provide an analysis of the hazardous waste that quantifies the concentration of any constituent identified in appendix VIII of Rule R315-261 that may reasonably be expected to be in the waste. Such constituents shall be identified and quantified if present, at levels detectable by using appropriate analytical procedures. The appendix VIII, Rule R315-261 constituents excluded from this analysis shall be identified and the basis for their exclusion explained. This analysis shall be used to provide all information required by Sections R315-266-100 through 112 and Subsections R315-270-22 and 66 and to enable the permit writer to prescribe such permit conditions as necessary to protect human health and the environment. Such analysis shall be included as a portion of the part B permit application, or, for facilities operating under the interim status standards of Sections R315-266-100 through 112, as a portion of the trial burn plan that may be submitted before the part B application under provisions of Subsections R315-270-66(g) as well as any other analysis required by the permit authority in preparing the permit. Owners and operators of boilers and industrial furnaces not operating under the interim status standards shall provide the information required by Subsections R315-270-22 or 66(c) in the part B application to the greatest extent possible.

(2) Throughout normal operation, the owner or operator shall conduct sampling and analysis as necessary to ensure that the hazardous waste, other fuels, and industrial furnace feedstocks fired into the boiler or industrial furnace are within the physical and chemical composition limits specified in the permit.

(c) Emissions standards. Owners and operators shall comply with emissions standards provided by Subsections R315-266-104 through 107.

(d) Permits.

(1) The owner or operator may burn only hazardous wastes specified in the facility permit and only under the operating conditions specified under Subsection R315-266-102(e), except in approved trial burns under the conditions specified in Section R315-270-66.

(2) Hazardous wastes not specified in the permit may not be burned until operating conditions have been specified under a new permit or permit modification, as applicable. Operating requirements for new wastes may be based on either trial burn results or alternative data included with part B of a permit application under Section R315-270-22.

(3) Boilers and industrial furnaces operating under the interim status standards of Section R315-266-103 are permitted under procedures provided by Subsections R315-270-66(g).

(4) A permit for a new boiler or industrial furnace, those boilers and industrial furnaces not operating under the interim status standards, shall establish appropriate conditions for each of the applicable requirements of Section R315-266-102, including but not limited to allowable hazardous waste firing rates and operating conditions necessary to meet the requirements of Subsection R315-266-102(e), in order to comply with the following standards:

(i) For the period beginning with initial introduction of hazardous waste and ending with initiation of the trial burn, and only for the minimum time required to bring the device to a

point of operational readiness to conduct a trial burn, not to exceed a duration of 720 hours operating time when burning hazardous waste, the operating requirements shall be those most likely to ensure compliance with the emission standards of Sections R315-266-104 through 107, based on the Director's engineering judgment. If the applicant is seeking a waiver from a trial burn to demonstrate conformance with a particular emission standard, the operating requirements during this initial period of operation shall include those specified by the applicable provisions of Sections R315-266-104, 105, 106, or 107. The Director may extend the duration of this period for up to 720 additional hours when good cause for the extension is demonstrated by the applicant.

(ii) For the duration of the trial burn, the operating requirements shall be sufficient to demonstrate compliance with the emissions standards of Sections R315-266-104 through 107 and shall be in accordance with the approved trial burn plan;

(iii) For the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis, data computation, submission of the trial burn results by the applicant, review of the trial burn results and modification of the facility permit by the Director to reflect the trial burn results, the operating requirements shall be those most likely to ensure compliance with the emission standards Sections R315-266-104 through 107 based on the Director's engineering judgment.

(iv) For the remaining duration of the permit, the operating requirements shall be those demonstrated in a trial burn or by alternative data specified in Section R315-270-22, as sufficient to ensure compliance with the emissions standards of Sections R315-266-104 through 107.

(e) Operating requirements

(1) General. A boiler or industrial furnace burning hazardous waste shall be operated in accordance with the operating requirements specified in the permit at all times where there is hazardous waste in the unit.

(2) Requirements to ensure compliance with the organic emissions standards

(i) DRE standard. Operating conditions shall be specified either on a case-by-case basis for each hazardous waste burned as those demonstrated, in a trial burn or by alternative data as specified in Sections R315-270-22, to be sufficient to comply with the destruction and removal efficiency (DRE) performance standard of Subsection R315-266-104(a) or as those special operating requirements provided by Subsection R315-266-104(a)(4) for the waiver of the DRE trial burn. When the DRE trial burn is not waived under Subsection R315-266-104(a)(4), each set of operating requirements shall specify the composition of the hazardous waste, including acceptable variations in the physical and chemical properties of the hazardous waste which will not affect compliance with the DRE performance standard, to which the operating requirements apply. For each such hazardous waste, the permit shall specify acceptable operating limits including, but not limited to, the following conditions as appropriate:

(A) Feed rate of hazardous waste and other fuels measured and specified as prescribed in Subsection R315-266-102(e)(6);

(B) Minimum and maximum device production rate when producing normal product expressed in appropriate units, measured and specified as prescribed in Subsection R315-266-102(e)(6);

(C) Appropriate controls of the hazardous waste firing system;

(D) Allowable variation in boiler and industrial furnace system design or operating procedures;

(E) Minimum combustion gas temperature measured at a location indicative of combustion chamber temperature, measured and specified as prescribed in Subsection R315-266-102(e)(6);

(F) An appropriate indicator of combustion gas velocity, measured and specified as prescribed in Subsection R315-266-102(e)(6), unless documentation is provided under Section R315-270-66 demonstrating adequate combustion gas residence time; and

(G) Such other operating requirements as are necessary to ensure that the DRE performance standard of Subsection R315-266-104(a) is met.

(ii) Carbon monoxide and hydrocarbon standards. The permit shall incorporate a carbon monoxide (CO) limit and, as appropriate, a hydrocarbon (HC) limit as provided by Subsections R315-266-104(b), (c), (d), (e) and (f). The permit limits shall be specified as follows:

(A) When complying with the CO standard of Subsections R315-266-104(b)(1), the permit limit is 100 ppmv;

(B) When complying with the alternative CO standard under Subsection R315-266-104(c), the permit limit for CO is based on the trial burn and is established as the average over all valid runs of the highest hourly rolling average CO level of each run, and the permit limit for HC is 20 ppmv, as defined in Subsection R315-266-104(c)(1), except as provided in Subsection R315-266-104(f).

(C) When complying with the alternative HC limit for industrial furnaces under Subsection R315-266-104(f), the permit limit for HC and CO is the baseline level when hazardous waste is not burned as specified by Subsection R315-266-104(f).

(iii) Start-up and shut-down. During start-up and shut-down of the boiler or industrial furnace, hazardous waste, except waste fed solely as an ingredient under the Tier I, or adjusted Tier I, feed rate screening limits for metals and chloride/chlorine, and except low risk waste exempt from the trial burn requirements under Subsections R315-266-104(a)(5) and R315-266-105 through 107, shall not be fed into the device unless the device is operating within the conditions of operation specified in the permit.

(3) Requirements to ensure conformance with the particulate standard.

(i) Except as provided in Subsections R315-266-102(e)(3)(ii) and (iii), the permit shall specify the following operating requirements to ensure conformance with the particulate standard specified in Section R315-266-105:

(A) Total ash feed rate to the device from hazardous waste, other fuels, and industrial furnace feedstocks, measured and specified as prescribed in Subsection R315-266-102(e)(6);

(B) Maximum device production rate when producing normal product expressed in appropriate units, and measured and specified as prescribed in Subsection R315-266-102(e)(6);

(C) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;

(D) Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and

(E) Such other operating requirements as are necessary to ensure that the particulate standard in Subsection R315-266-105(a) is met.

(ii) Permit conditions to ensure conformance with the particulate matter standard shall not be provided for facilities exempt from the particulate matter standard under Subsection R315-266-105(b);

(iii) For cement kilns and light-weight aggregate kilns, permit conditions to ensure compliance with the particulate standard shall not limit the ash content of hazardous waste or other feed materials.

(4) Requirements to ensure conformance with the metals emissions standard.

(i) For conformance with the Tier I, or adjusted Tier I, metals feed rate screening limits of Subsections R315-266-106(b) or (e), the permit shall specify the following operating

requirements:

(A) Total feed rate of each metal in hazardous waste, other fuels, and industrial furnace feedstocks measured and specified under provisions of Subsection R315-266-102(e)(6);

(B) Total feed rate of hazardous waste measured and specified as prescribed in Subsection R315-266-102(e)(6);

(C) A sampling and metals analysis program for the hazardous waste, other fuels, and industrial furnace feedstocks;

(ii) For conformance with the Tier II metals emission rate screening limits under Subsection R315-266-106(c) and the Tier III metals controls under Subsection R315-266-106(d), the permit shall specify the following operating requirements:

(A) Maximum emission rate for each metal specified as the average emission rate during the trial burn;

(B) Feed rate of total hazardous waste and pumpable hazardous waste, each measured and specified as prescribed in Subsection R315-266-102(e)(6)(i);

(C) Feed rate of each metal in the following feedstreams, measured and specified as prescribed in Subsection R315-266-102(e)(6):

(I) Total feedstreams;

(II) Total hazardous waste feed; and

(III) Total pumpable hazardous waste feed;

(D) Total feed rate of chlorine and chloride in total feedstreams measured and specified as prescribed in Subsection R315-266-102(e)(6);

(E) Maximum combustion gas temperature measured at a location indicative of combustion chamber temperature, and measured and specified as prescribed in Subsection R315-266-102(e)(6);

(F) Maximum flue gas temperature at the inlet to the particulate matter air pollution control system measured and specified as prescribed in Subsection R315-266-102(e)(6);

(G) Maximum device production rate when producing normal product expressed in appropriate units and measured and specified as prescribed in Subsection R315-266-102(e)(6);

(H) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;

(I) Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and

(J) Such other operating requirements as are necessary to ensure that the metals standards under Subsections R315-266-106(c) or 106(d) are met.

(iii) For conformance with an alternative implementation approach approved by the Director under Subsection R315-266-106(f), the permit shall specify the following operating requirements:

(A) Maximum emission rate for each metal specified as the average emission rate during the trial burn;

(B) Feed rate of total hazardous waste and pumpable hazardous waste, each measured and specified as prescribed in Subsection R315-266-102(e)(6)(i);

(C) Feed rate of each metal in the following feedstreams, measured and specified as prescribed in Subsection R315-266-102(e)(6):

(I) Total hazardous waste feed; and

(II) Total pumpable hazardous waste feed;

(D) Total feed rate of chlorine and chloride in total feedstreams measured and specified prescribed in Subsection R315-266-102(e)(6);

(E) Maximum combustion gas temperature measured at a location indicative of combustion chamber temperature, and measured and specified as prescribed in Subsection R315-266-102(e)(6);

(F) Maximum flue gas temperature at the inlet to the particulate matter air pollution control system measured and specified as prescribed in Subsection R315-266-102(e)(6);

(G) Maximum device production rate when producing normal product expressed in appropriate units and measured and specified as prescribed in Subsection R315-266-102(e)(6);

(H) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;

(I) Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and

(J) Such other operating requirements as are necessary to ensure that the metals standards under Subsections R315-266-106(c) or 106(d) are met.

(5) Requirements to ensure conformance with the hydrogen chloride and chlorine gas standards.

(i) For conformance with the Tier I total chloride and chlorine feed rate screening limits of Subsection R315-266-107(b)(1), the permit shall specify the following operating requirements:

(A) Feed rate of total chloride and chlorine in hazardous waste, other fuels, and industrial furnace feedstocks measured and specified as prescribed in Subsection R315-266-102(e)(6);

(B) Feed rate of total hazardous waste measured and specified as prescribed in Subsection R315-266-102(e)(6);

(C) A sampling and analysis program for total chloride and chlorine for the hazardous waste, other fuels, and industrial furnace feedstocks;

(ii) For conformance with the Tier II HCl and Cl₂ emission rate screening limits under Subsection R315-266-107(b)(2) and the Tier III HCl and Cl₂ controls under Subsection R315-266-107(c), the permit shall specify the following operating requirements:

(A) Maximum emission rate for HCl and for Cl₂ specified as the average emission rate during the trial burn;

(B) Feed rate of total hazardous waste measured and specified as prescribed in Subsection R315-266-102(e)(6);

(C) Total feed rate of chlorine and chloride in total feedstreams, measured and specified as prescribed in Subsection R315-266-102(e)(6);

(D) Maximum device production rate when producing normal product expressed in appropriate units, measured and specified as prescribed in Subsection R315-266-102(e)(6);

(E) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;

(F) Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and

(G) Such other operating requirements as are necessary to ensure that the HCl and Cl₂ standards under Subsections R315-266-107 (b)(2) or (c) are met.

(6) Measuring parameters and establishing limits based on trial burn data

(i) General requirements. As specified in Subsections R315-266-102(e)(2) through (e)(5), each operating parameter shall be measured, and permit limits on the parameter shall be established, according to either of the following procedures:

(A) Instantaneous limits. A parameter may be measured and recorded on an instantaneous basis, i.e., the value that occurs at any time, and the permit limit specified as the time-weighted average during all valid runs of the trial burn; or

(B) Hourly rolling average. The limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:

(I) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

(II) An hourly rolling average is the arithmetic mean of the

60 most recent 1-minute average values recorded by the continuous monitoring system.

(III) The permit limit for the parameter shall be established based on trial burn data as the average over all valid test runs of the highest hourly rolling average value for each run.

(ii) Rolling average limits for carcinogenic metals and lead. Feed rate limits for the carcinogenic metals, i.e., arsenic, beryllium, cadmium and chromium, and lead may be established either on an hourly rolling average basis as prescribed by Subsection R315-266-102(e)(6)(i) or on, up to, a 24 hour rolling average basis. If the owner or operator elects to use an average period from 2 to 24 hours:

(A) The feed rate of each metal shall be limited at any time to ten times the feed rate that would be allowed on an hourly rolling average basis;

(B) The continuous monitor shall meet the following specifications:

(I) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

(I) The rolling average for the selected averaging period is defined as the arithmetic mean of one hour block averages for the averaging period. A one hour block average is the arithmetic mean of the one minute averages recorded during the 60-minute period beginning at one minute after the beginning of the preceding clock hour; and

(C) The permit limit for the feed rate of each metal shall be established based on trial burn data as the average over all valid test runs of the highest hourly rolling average feed rate for each run.

(iii) Feed rate limits for metals, total chloride and chlorine, and ash. Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance, i.e., metals, chloride/chlorine, and ash, in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream shall be monitored under the continuous monitoring requirements of Subsections R315-266-102(e)(6)(i) and (ii).

(iv) Conduct of trial burn testing.

(A) If compliance with all applicable emissions standards of Sections R315-266-104 through 107 is not demonstrated simultaneously during a set of test runs, the operating conditions of additional test runs required to demonstrate compliance with remaining emissions standards shall be as close as possible to the original operating conditions.

(B) Prior to obtaining test data for purposes of demonstrating compliance with the emissions standards of Sections R315-266-104 through 107 or establishing limits on operating parameters under Section R315-266-102, the facility shall operate under trial burn conditions for a sufficient period to reach steady-state operations. The Director may determine, however, that industrial furnaces that recycle collected particulate matter back into the furnace and that comply with an alternative implementation approach for metals under Subsection R315-266-106(f) need not reach steady state conditions with respect to the flow of metals in the system prior to beginning compliance testing for metals emissions.

(C) Trial burn data on the level of an operating parameter for which a limit shall be established in the permit shall be obtained during emissions sampling for the pollutant(s), i.e., metals, PM, HCl/Cl₂, organic compounds, for which the parameter shall be established as specified by Subsection R315-266-102(e).

(7) General requirements

(i) Fugitive emissions. Fugitive emissions shall be controlled by:

(A) Keeping the combustion zone totally sealed against fugitive emissions; or

(B) Maintaining the combustion zone pressure lower than atmospheric pressure; or

(C) An alternate means of control demonstrated, with part B of the permit application, to provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure.

(ii) Automatic waste feed cutoff. A boiler or industrial furnace shall be operated with a functioning system that automatically cuts off the hazardous waste feed when operating conditions deviate from those established under Section R315-266-102. The Director may limit the number of cutoffs per an operating period on a case-by-case basis. In addition:

(A) The permit limit for, the indicator of, minimum combustion chamber temperature shall be maintained while hazardous waste or hazardous waste residues remain in the combustion chamber,

(B) Exhaust gases shall be ducted to the air pollution control system operated in accordance with the permit requirements while hazardous waste or hazardous waste residues remain in the combustion chamber; and

(C) Operating parameters for which permit limits are established shall continue to be monitored during the cutoff, and the hazardous waste feed shall not be restarted until the levels of those parameters comply with the permit limits. For parameters that may be monitored on an instantaneous basis, the Director shall establish a minimum period of time after a waste feed cutoff during which the parameter shall not exceed the permit limit before the hazardous waste feed may be restarted.

(iii) Changes. A boiler or industrial furnace shall cease burning hazardous waste when changes in combustion properties, or feed rates of the hazardous waste, other fuels, or industrial furnace feedstocks, or changes in the boiler or industrial furnace design or operating conditions deviate from the limits as specified in the permit.

(8) Monitoring and Inspections.

(i) The owner or operator shall monitor and record the following, at a minimum, while burning hazardous waste:

(A) If specified by the permit, feed rates and composition of hazardous waste, other fuels, and industrial furnace feedstocks, and feed rates of ash, metals, and total chloride and chlorine;

(B) If specified by the permit, carbon monoxide (CO), hydrocarbons (HC), and oxygen on a continuous basis at a common point in the boiler or industrial furnace downstream of the combustion zone and prior to release of stack gases to the atmosphere in accordance with operating requirements specified in Subsection R315-266-102(e)(2)(ii). CO, HC, and oxygen monitors shall be installed, operated, and maintained in accordance with methods specified in appendix IX of Rule R315-266.

(C) Upon the request of the Director, sampling and analysis of the hazardous waste, and other fuels and industrial furnace feedstocks as appropriate, residues, and exhaust emissions shall be conducted to verify that the operating requirements established in the permit achieve the applicable standards of Sections R315-266-104 through 107.

(ii) All monitors shall record data in units corresponding to the permit limit unless otherwise specified in the permit.

(iii) The boiler or industrial furnace and associated equipment, pumps, valves, pipes, fuel storage tanks, etc., shall be subjected to thorough visual inspection when it contains hazardous waste, at least daily for leaks, spills, fugitive emissions, and signs of tampering.

(iv) The automatic hazardous waste feed cutoff system and associated alarms shall be tested at least once every 7 days when hazardous waste is burned to verify operability, unless the applicant demonstrates to the Director that weekly inspections

will unduly restrict or upset operations and that less frequent inspections will be adequate. At a minimum, operational testing shall be conducted at least once every 30 days.

(v) These monitoring and inspection data shall be recorded and the records shall be placed in the operating record required by Section R315-264-73.

(9) Direct transfer to the burner. If hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit, the owner and operator shall comply with Section R315-266-111.

(10) Recordkeeping. The owner or operator shall maintain in the operating record of the facility all information and data required by Section R315-266-102 for five years.

(11) Closure. At closure, the owner or operator shall remove all hazardous waste and hazardous waste residues, including, but not limited to, ash, scrubber waters, and scrubber sludges, from the boiler or industrial furnace.

R315-266-103. Hazardous Waste Burned in Boilers and Industrial Furnaces -- Interim Status Standards for Burners.

(a) Purpose, scope, applicability

(1) General.

(i) The purpose of Section R315-266-103 is to establish minimum national standards for owners and operators of "existing" boilers and industrial furnaces that burn hazardous waste where such standards define the acceptable management of hazardous waste during the period of interim status. The standards of Section R315-266-103 apply to owners and operators of existing facilities until either a permit is issued under Section R315-266-102(d) or until closure responsibilities identified in Section R315-266-103 are fulfilled.

(ii) Existing or in existence means a boiler or industrial furnace that on or before August 21, 1991 is either in operation burning or processing hazardous waste or for which construction, including the ancillary facilities to burn or to process the hazardous waste, has commenced. A facility has commenced construction if the owner or operator has obtained the Federal, State, and local approvals or permits necessary to begin physical construction; and either:

(A) A continuous on-site, physical construction program has begun; or

(B) The owner or operator has entered into contractual obligations which cannot be canceled or modified without substantial loss-for physical construction of the facility to be completed within a reasonable time.

(iii) If a boiler or industrial furnace is located at a facility that already has a permit or interim status, then the facility shall comply with the applicable regulations dealing with permit modifications in Section R315-270-42 or changes in interim status in Section R315-270-72.

(2) Exemptions. The requirements of Section R315-266-103 do not apply to hazardous waste and facilities exempt under Subsection R315-266-100(b), or Section R315-266-108.

(3) Prohibition on burning dioxin-listed wastes. The following hazardous waste listed for dioxin and hazardous waste derived from any of these wastes may not be burned in a boiler or industrial furnace operating under interim status: F020, F021, F022, F023, F026, and F027.

(4) Applicability of Rule R315-265 standards. Owners and operators of boilers and industrial furnaces that burn hazardous waste and are operating under interim status are subject to the following provisions of Rule R315-265, except as provided otherwise by Section R315-266-103:

(i) 40 CFR 265.4, which is adopted by reference, General;

(ii) 40 CFR 265.11 through 17, which are adopted by reference, General facility standards;

(iii) 40 CFR 265.31 through 37, which are adopted by reference, Preparedness and prevention;

(iv) 40 CFR 265.51 through 56, which are adopted by

reference, Contingency plan and emergency procedures;

(v) 40 CFR 265.71 through 77, which are adopted by reference, Manifest system, recordkeeping, and reporting, except that 40 CFR 265.265.71, 72, and 76, which are incorporated by reference in Rule R315-265, do not apply to owners and operators of on-site facilities that do not receive any hazardous waste from off-site sources;

(vi) 40 CFR 265.111 through 115, which are adopted by reference, Closure and post-closure;

(vii) 40 CFR 265.141, 142, 143, and 147 through 150, which are adopted by reference, Financial requirements, except that States and the Federal government are exempt from the requirements of 40 CFR 265.140 through 150, which are adopted by reference; and

(viii) 40 CFR 265.1050 through 1064, which are adopted by reference, Air emission standards for equipment leaks, except 265-1050(a).

(5) Special requirements for furnaces. The following controls apply during interim status to industrial furnaces, e.g., kilns, cupolas, that feed hazardous waste for a purpose other than solely as an ingredient, see Subsection R315-266-103(a)(5)(ii), at any location other than the hot end where products are normally discharged or where fuels are normally fired:

(i) Controls.

(A) The hazardous waste shall be fed at a location where combustion gas temperatures are at least 1800 deg. F;

(B) The owner or operator shall determine that adequate oxygen is present in combustion gases to combust organic constituents in the waste and retain documentation of such determination in the facility record;

(C) For cement kiln systems, the hazardous waste shall be fed into the kiln; and

(D) The hydrocarbon controls of Subsections R315-266-104(c) or 103(c)(5) apply upon certification of compliance under Subsection R315-266-103(c) irrespective of the CO level achieved during the compliance test.

(ii) Burning hazardous waste solely as an ingredient. A hazardous waste is burned for a purpose other than solely as an ingredient if it meets either of these criteria:

(A) The hazardous waste has a total concentration of nonmetal compounds listed in Rule R315-261, appendix VIII, exceeding 500 ppm by weight, as-fired, and so is considered to be burned for destruction. The concentration of nonmetal compounds in a waste as-generated may be reduced to the 500 ppm limit by bona fide treatment that removes or destroys nonmetal constituents. Blending for dilution to meet the 500 ppm limit is prohibited and documentation that the waste has not been impermissibly diluted shall be retained in the facility record; or

(B) The hazardous waste has a heating value of 5,000 Btu/lb or more, as-fired, and so is considered to be burned as fuel. The heating value of a waste as-generated may be reduced to below the 5,000 Btu/lb limit by bona fide treatment that removes or destroys organic constituents. Blending to augment the heating value to meet the 5,000 Btu/lb limit is prohibited and documentation that the waste has not been impermissibly blended shall be retained in the facility record.

(6) Restrictions on burning hazardous waste that is not a fuel. Prior to certification of compliance under Subsection R315-266-103(c), owners and operators shall not feed hazardous waste that has a heating value less than 5,000 Btu/lb, as-generated, except that the heating value of a waste as-generated may be increased to above the 5,000 Btu/lb limit by bona fide treatment; however, blending to augment the heating value to meet the 5,000 Btu/lb limit is prohibited and records shall be kept to document that impermissible blending has not occurred, in a boiler or industrial furnace, except that:

(i) Hazardous waste may be burned solely as an ingredient;

or

(ii) Hazardous waste may be burned for purposes of compliance testing, or testing prior to compliance testing, for a total period of time not to exceed 720 hours; or

(iii) Such waste may be burned if the Director has documentation to show that, prior to August 21, 1991:

(A) The boiler or industrial furnace is operating under the interim status standards for incinerators provided by 40 CFR 265.340 through 352, which are adopted by reference, or the interim status standards for thermal treatment units provided by 40 CFR 265.370 through 383, which are adopted by reference; and

(B) The boiler or industrial furnace met the interim status eligibility requirements under Section R315-270-70 for 40 CFR 265.340 through 383, which are adopted by reference; and

(C) Hazardous waste with a heating value less than 5,000 Btu/lb was burned prior to that date; or

(iv) Such waste may be burned in a halogen acid furnace if the waste was burned as an excluded ingredient under Section R315-261-2(e) prior to February 21, 1991 and documentation is kept on file supporting this claim.

(7) Direct transfer to the burner. If hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit, the owner and operator shall comply with Section R315-266-111.

(b) Certification of precompliance

(1) General. The owner or operator shall provide complete and accurate information specified in Subsection R315-266-103(b)(2) to the Director on or before August 21, 1991, and shall establish limits for the operating parameters specified in Subsection R315-266-103(b)(3). Such information is termed a "certification of precompliance" and constitutes a certification that the owner or operator has determined that, when the facility is operated within the limits specified in Subsection R315-266-103(b)(3), the owner or operator believes that, using best engineering judgment, emissions of particulate matter, metals, and HCl and Cl₂ are not likely to exceed the limits provided by Sections R315-266-105 through 107. The facility may burn hazardous waste only under the operating conditions that the owner or operator establishes under Subsection R315-266-103(b)(3) until the owner or operator submits a revised certification of precompliance under Subsection R315-266-103(b)(8) or a certification of compliance under Subsection R315-266-103(c), or until a permit is issued.

(2) Information required. The following information shall be submitted with the certification of precompliance to support the determination that the limits established for the operating parameters identified in Subsection R315-266-103(b)(3) are not likely to result in an exceedance of the allowable emission rates for particulate matter, metals, and HCl and Cl₂.

(i) General facility information:

(A) EPA facility ID number;

(B) Facility name, contact person, telephone number, and address;

(C) Description of boilers and industrial furnaces burning hazardous waste, including type and capacity of device;

(D) A scaled plot plan showing the entire facility and location of the boilers and industrial furnaces burning hazardous waste; and

(E) A description of the air pollution control system on each device burning hazardous waste, including the temperature of the flue gas at the inlet to the particulate matter control system.

(ii) Except for facilities complying with the Tier I or Adjusted Tier I feed rate screening limits for metals or total chlorine and chloride provided by Subsections R315-266-106(b) or (e) and 107(b)(1) or (e), respectively, the estimated uncontrolled, at the inlet to the air pollution control system, emissions of particulate matter, each metal controlled by Section

R315-266-106, and hydrogen chloride and chlorine, and the following information to support such determinations:

(A) The feed rate (lb/hr) of ash, chlorine, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium in each feedstream, hazardous waste, other fuels, industrial furnace feedstocks;

(B) The estimated partitioning factor to the combustion gas for the materials identified in Subsection R315-266-103(b)(2)(ii)(A) and the basis for the estimate and an estimate of the partitioning to HCl and Cl₂ of total chloride and chlorine in feed materials. To estimate the partitioning factor, the owner or operator shall use either best engineering judgment or the procedures specified in appendix IX of Rule R315-266.

(C) For industrial furnaces that recycle collected particulate matter (PM) back into the furnace and that will certify compliance with the metals emissions standards under Subsection R315-266-103(c)(3)(ii)(A), the estimated enrichment factor for each metal. To estimate the enrichment factor, the owner or operator shall use either best engineering judgment or the procedures specified in "Alternative Methodology for Implementing Metals Controls" in appendix IX Rule R315-266.

(D) If best engineering judgment is used to estimate partitioning factors or enrichment factors under Subsections R315-266-103(b)(2)(ii)(B) or (b)(2)(ii)(C) respectively, the basis for the judgment. When best engineering judgment is used to develop or evaluate data or information and make determinations under Section R315-266-103, the determinations shall be made by a qualified, registered professional engineer and a certification of his/her determinations in accordance with Subsection R315-270-11(d) shall be provided in the certification of precompliance.

(iii) For facilities complying with the Tier I or Adjusted Tier I feed rate screening limits for metals or total chlorine and chloride provided by Subsections R315-266-106(b) or (e) and 107(b)(1) or (e), the feed rate (lb/hr) of total chloride and chlorine, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium in each feed stream, hazardous waste, other fuels, industrial furnace feedstocks.

(iv) For facilities complying with the Tier II or Tier III emission limits for metals or HCl and Cl₂, under Subsections R315-266-106(c) or (d) or 107(b)(2) or (c), the estimated controlled, outlet of the air pollution control system, emissions rates of particulate matter, each metal controlled by Section R315-266-106, and HCl and Cl₂, and the following information to support such determinations:

(A) The estimated air pollution control system (APCS) removal efficiency for particulate matter, HCl, Cl₂, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium.

(B) To estimate APCS removal efficiency, the owner or operator shall use either best engineering judgment or the procedures prescribed in appendix IX of Rule R315-266.

(C) If best engineering judgment is used to estimate APCS removal efficiency, the basis for the judgment. Use of best engineering judgment shall be in conformance with provisions of Subsection R315-266-103(b)(2)(ii)(D).

(v) Determination of allowable emissions rates for HCl, Cl₂, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium, and the following information to support such determinations:

(A) For all facilities:

(I) Physical stack height;

(II) Good engineering practice stack height as defined by 40 CFR 51.100(ii);

(III) Maximum flue gas flow rate;

(IV) Maximum flue gas temperature;

(V) Attach a US Geological Service topographic map, or equivalent, showing the facility location and surrounding land

within 5 km of the facility;

(VI) Identify terrain type: complex or noncomplex; and

(VII) Identify land use: urban or rural.

(B) For owners and operators using Tier III site specific dispersion modeling to determine allowable levels under Subsection R315-266-106(d) or 107(c), or adjusted Tier I feed rate screening limits under Subsections R315-266-106(e) or 107(e):

(I) Dispersion model and version used;

(II) Source of meteorological data;

(III) The dilution factor in micrograms per cubic meter per gram per second of emissions for the maximum annual average off-site, unless on-site is required, ground level concentration (MEI location); and

(IV) Indicate the MEI location on the map required under Subsection R315-266-103(b)(2)(v)(A)(5);

(vi) For facilities complying with the Tier II or III emissions rate controls for metals or HCl and Cl₂, a comparison of the estimated controlled emissions rates determined under Subsection R315-266-103(b)(2)(iv) with the allowable emission rates determined under Subsection R315-266-103(b)(2)(v);

(vii) For facilities complying with the Tier I, or adjusted Tier I, feed rate screening limits for metals or total chloride and chlorine, a comparison of actual feed rates of each metal and total chlorine and chloride determined under Subsection R315-266-103(b)(2)(iii) to the Tier I allowable feed rates; and

(viii) For industrial furnaces that feed hazardous waste for any purpose other than solely as an ingredient, as defined by Subsection R315-266-103(a)(5)(ii), at any location other than the product discharge end of the device, documentation of compliance with the requirements of Subsections R315-266-103(a)(5)(i)(A), (B), and (C).

(ix) For industrial furnaces that recycle collected particulate matter (PM) back into the furnace and that will certify compliance with the metals emissions standards under Subsection R315-266-103(c)(3)(ii)(A):

(A) The applicable particulate matter standard in lb/hr; and

(B) The precompliance limit on the concentration of each metal in collected PM.

(3) Limits on operating conditions. The owner and operator shall establish limits on the following parameters consistent with the determinations made under Subsection R315-266-103(b)(2) and certify, under provisions of Subsection R315-266-103(b)(9), to the Director that the facility will operate within the limits during interim status when there is hazardous waste in the unit until revised certification of precompliance under Subsection R315-266-103(b)(8) or certification of compliance under Subsection R315-266-103(c):

(i) Feed rate of total hazardous waste and, unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under Subsections R315-266-106(b) or (e), pumpable hazardous waste;

(ii) Feed rate of each metal in the following feed streams:

(A) Total feed streams, except that industrial furnaces that comply with the alternative metals implementation approach under Subsection R315-266-103(b)(4) shall specify limits on the concentration of each metal in collected particulate matter in lieu of feed rate limits for total feedstreams;

(B) Total hazardous waste feed, unless complying with the Tier I or Adjusted Tier I metals feed rate screening limits under Subsections R315-266-106(b) or (e); and

(C) Total pumpable hazardous waste feed, unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under Subsections R315-266-106(b) or (e);

(iii) Total feed rate of chlorine and chloride in total feed streams;

(iv) Total feed rate of ash in total feed streams, except that the ash feed rate for cement kilns and light-weight aggregate kilns is not limited; and

(v) Maximum production rate of the device in appropriate units when producing normal product, unless complying with the Tier I or Adjusted Tier I feed rate screening limits for chlorine under Subsections R315-266-107(b)(1) or (e) and for all metals under Subsections R315-266-106(b) or (e), and the uncontrolled particulate emissions do not exceed the standard under Subsection R315-266-105.

(4) Operating requirements for furnaces that recycle PM. Owners and operators of furnaces that recycle collected particulate matter (PM) back into the furnace and that will certify compliance with the metals emissions controls under Subsection R315-266-103(c)(3)(ii)(A) shall comply with the special operating requirements provided in "Alternative Methodology for Implementing Metals Controls" in appendix IX of Rule R315-266.

(5) Measurement of feed rates and production rate

(i) General requirements. Limits on each of the parameters specified in Subsection R315-266-103(b)(3), except for limits on metals concentrations in collected particulate matter (PM) for industrial furnaces that recycle collected PM, shall be established and continuously monitored under either of the following methods:

(A) Instantaneous limits. A limit for a parameter may be established and continuously monitored and recorded on an instantaneous basis, i.e., the value that occurs at any time, not to be exceeded at any time; or

(B) Hourly rolling average limits. A limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:

(I) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

(II) An hourly rolling average is the arithmetic mean of the 60 most recent 1-minute average values recorded by the continuous monitoring system.

(ii) Rolling average limits for carcinogenic metals and lead. Feed rate limits for the carcinogenic metals, arsenic, beryllium, cadmium, and chromium, and lead may be established either on an hourly rolling average basis as prescribed by Subsection R315-266-103(b)(5)(i)(B) or on, up to, a 24 hour rolling average basis. If the owner or operator elects to use an averaging period from 2 to 24 hours:

(A) The feed rate of each metal shall be limited at any time to ten times the feed rate that would be allowed on an hourly rolling average basis;

(B) The continuous monitor shall meet the following specifications:

(I) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

(II) The rolling average for the selected averaging period is defined as the arithmetic mean of one hour block averages for the averaging period. A one hour block average is the arithmetic mean of the one minute averages recorded during the 60-minute period beginning at one minute after the beginning of preceding clock hour.

(iii) Feed rate limits for metals, total chloride and chlorine, and ash. Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance, i.e., metals, chloride/chlorine, and ash, in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream shall be monitored under the continuous monitoring requirements of Subsections R315-266-103(b)(5)(i) and (ii).

(6) Public notice requirements at precompliance. On or before August 21, 1991 the owner or operator shall submit a notice with the following information for publication in a major local newspaper of general circulation and send a copy of the notice to the appropriate units of State and local government. The owner and operator shall provide to the Director with the certification of precompliance evidence of submitting the notice for publication. The notice, which shall be entitled "Notice of Certification of Precompliance with Hazardous Waste Burning Requirements of Subsection R315-266-103(b)", shall include:

(i) Name and address of the owner and operator of the facility as well as the location of the device burning hazardous waste;

(ii) Date that the certification of precompliance is submitted to the Director;

(iii) Brief description of the regulatory process required to comply with the interim status requirements of Section R315-266-103 including required emissions testing to demonstrate conformance with emissions standards for organic compounds, particulate matter, metals, and HCl and Cl₂;

(iv) Types and quantities of hazardous waste burned including, but not limited to, source, whether solids or liquids, as well as an appropriate description of the waste;

(v) Type of device(s) in which the hazardous waste is burned including a physical description and maximum production rate of each device;

(vi) Types and quantities of other fuels and industrial furnace feedstocks fed to each unit;

(vii) Brief description of the basis for this certification of precompliance as specified in Subsection R315-266-103(b)(2);

(viii) Locations where the record for the facility can be viewed and copied by interested parties. These records and locations shall at a minimum include:

(A) The administrative record kept by the Agency office where the supporting documentation was submitted or another location designated by the Director; and

(B) The BIF correspondence file kept at the facility site where the device is located. The correspondence file shall include all correspondence between the facility and the Director and local regulatory officials, including copies of all certifications and notifications, such as the precompliance certification, precompliance public notice, notice of compliance testing, compliance test report, compliance certification, time extension requests and approvals or denials, enforcement notifications of violations, and copies of EPA and State site visit reports submitted to the owner or operator.

(ix) Notification of the establishment of a facility mailing list whereby interested parties shall notify the Director that they wish to be placed on the mailing list to receive future information and notices about this facility; and

(x) Location, mailing address, of the Division of Waste Management and Radiation Control, where further information can be obtained on regulation of hazardous waste burning.

(7) Monitoring other operating parameters. When the monitoring systems for the operating parameters listed in Subsections R315-266-103(c)(1)(v) through (xiii) are installed and operating in conformance with vendor specifications or, for CO, HC, and oxygen, specifications provided by appendix IX of Rule R315-266, as appropriate, the parameters shall be continuously monitored and records shall be maintained in the operating record.

(8) Revised certification of precompliance. The owner or operator may revise at any time the information and operating conditions documented under Subsections R315-266-103(b)(2) and (b)(3) in the certification of precompliance by submitting a revised certification of precompliance under procedures provided by Subsections R315-266-103(b)(2) and (b)(3).

(i) The public notice requirements of Subsection R315-266-103(b)(6) do not apply to recertifications.

(ii) The owner and operator shall operate the facility within the limits established for the operating parameters under Subsection R315-266-103(b)(3) until a revised certification is submitted under Subsection R315-266-103(b)(8) or a certification of compliance is submitted under Subsection R315-266-103(c).

(9) Certification of precompliance statement. The owner or operator shall include the following signed statement with the certification of precompliance submitted to the Director:

"I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation. Copies of all emissions tests, dispersion modeling results and other information used to determine conformance with the requirements of Subsection R315-266-103(b) are available at the facility and can be obtained from the facility contact person listed above. Based on my inquiry of the person or persons who manages the facility, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also acknowledge that the operating limits established in this certification pursuant to Subsections R315-266-103(b)(3) and (4) are enforceable limits at which the facility can legally operate during interim status until: (1) A revised certification of precompliance is submitted, (2) a certification of compliance is submitted, or (3) an operating permit is issued."

(c) Certification of compliance. The owner or operator shall conduct emissions testing to document compliance with the emissions standards of Subsections R315-266-104(b) through (e) and 103(a)(5)(i)(D) and Sections R315-266-105, 106, 107, and, under the procedures prescribed by Subsection R315-266-103(c), except under extensions of time provided by Subsection R315-266-103(c)(7). Based on the compliance test, the owner or operator shall submit to the Director on or before August 21, 1992 a complete and accurate "certification of compliance," under Subsection R315-266-103(c)(4), with those emission standards establishing limits on the operating parameters specified in Subsection R315-266-103(c)(1).

(1) Limits on operating conditions. The owner or operator shall establish limits on the following parameters based on operations during the compliance test, under procedures prescribed in Subsection R315-266-103(c)(4)(iv), or as otherwise specified and include these limits with the certification of compliance. The boiler or industrial furnace shall be operated in accordance with these operating limits and the applicable emissions standards of Subsections R315-266-104(b) through (e) and 103(a)(5)(i)(D) and Sections R315-266-105, 106, and 107, at all times when there is hazardous waste in the unit.

(i) Feed rate of total hazardous waste and, unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under Subsection R315-266-106(b) or (e), pumpable hazardous waste;

(ii) Feed rate of each metal in the following feedstreams:

(A) Total feedstreams, except that:

(I) Facilities that comply with Tier I or Adjusted Tier I metals feed rate screening limits may set their operating limits at the metals feed rate screening limits determined under Subsections R315-266-106(b) or (e); and

(II) Industrial furnaces that shall comply with the alternative metals implementation approach under Subsection R315-266-103(c)(3)(ii) shall specify limits on the concentration of each metal in the collected particulate matter in lieu of feed rate limits for total feedstreams;

(B) Total hazardous waste feed, unless complying with the

Tier I or Adjusted Tier I metals feed rate screening limits under Subsections R315-266-106(b) or (e); and

(C) Total pumpable hazardous waste feed, unless complying with the Tier I or Adjusted Tier I metals feed rate screening limits under Subsection R315-266-106(b) or (e);

(iii) Total feed rate of chlorine and chloride in total feed streams, except that facilities that comply with Tier I or Adjusted Tier I feed rate screening limits may set their operating limits at the total chlorine and chloride feed rate screening limits determined under Subsections R315-266-107(b)(1) or (e);

(iv) Total feed rate of ash in total feed streams, except that the ash feed rate for cement kilns and light-weight aggregate kilns is not limited;

(v) Carbon monoxide concentration, and where required, hydrocarbon concentration in stack gas. When complying with the CO controls of Subsection R315-266-104(b), the CO limit is 100 ppmv, and when complying with the HC controls of Subsection R315-266-104(c), the HC limit is 20 ppmv. When complying with the CO controls of Subsection R315-266-104(c), the CO limit is established based on the compliance test;

(vi) Maximum production rate of the device in appropriate units when producing normal product, unless complying with the Tier I or Adjusted Tier I feed rate screening limits for chlorine under Subsections R315-266-107(b)(1) or (e) and for all metals under Subsections R315-266-106(b) or (e), and the uncontrolled particulate emissions do not exceed the standard under Section R315-266-105;

(vii) Maximum combustion chamber temperature where the temperature measurement is as close to the combustion zone as possible and is upstream of any quench water injection, unless complying with the Tier I or Adjusted Tier I metals feed rate screening limits under Subsections R315-266-106(b) or (e);

(viii) Maximum flue gas temperature entering a particulate matter control device, unless complying with Tier I or Adjusted Tier I metals feed rate screening limits under Subsections R315-266-106(b) or (e) and the total chlorine and chloride feed rate screening limits under Subsections R315-266-107(b) or (e);

(ix) For systems using wet scrubbers, including wet ionizing scrubbers, unless complying with the Tier I or Adjusted Tier I metals feed rate screening limits under Subsections R315-266-106(b) or (e) and the total chlorine and chloride feed rate screening limits under Subsections R315-266-107(b)(1) or (e):

(A) Minimum liquid to flue gas ratio;

(B) Minimum scrubber blowdown from the system or maximum suspended solids content of scrubber water; and

(C) Minimum pH level of the scrubber water;

(x) For systems using venturi scrubbers, the minimum differential gas pressure across the venture, unless complying with the Tier I or Adjusted Tier I metals feed rate screening limits under Subsections R315-266-106(b) or (e) and the total chlorine and chloride feed rate screening limits under Subsections R315-266-107(b)(1) or (e);

(xi) For systems using dry scrubbers, unless complying with the Tier I or Adjusted Tier I metals feed rate screening limits under Subsections R315-266-106(b) or (e) and the total chlorine and chloride feed rate screening limits under Subsections R315-266-107(b)(1) or (e):

(A) Minimum caustic feed rate; and

(B) Maximum flue gas flow rate;

(xii) For systems using wet ionizing scrubbers or electrostatic precipitators, unless complying with the Tier I or Adjusted Tier I metals feed rate screening limits under Subsections R315-266-106(b) or (e) and the total chlorine and chloride feed rate screening limits under Subsections R315-266-107(b)(1) or (e):

(A) Minimum electrical power in kilovolt amperes (kVA) to the precipitator plates; and

(B) Maximum flue gas flow rate;

(xiii) For systems using fabric filters (baghouses), the

minimum pressure drop, unless complying with the Tier I or Adjusted Tier I metal feed rate screening limits under Subsections R315-266-106(b) or (e) and the total chlorine and chloride feed rate screening limits under Subsections R315-266-107(b)(1) or (e).

(2) Prior notice of compliance testing. At least 30 days prior to the compliance testing required by Subsection R315-266-103(c)(3), the owner or operator shall notify the Director and submit the following information:

(i) General facility information including:

(A) EPA facility ID number;

(B) Facility name, contact person, telephone number, and address;

(C) Person responsible for conducting compliance test, including company name, address, and telephone number, and a statement of qualifications;

(D) Planned date of the compliance test;

(ii) Specific information on each device to be tested including:

(A) Description of boiler or industrial furnace;

(B) A scaled plot plan showing the entire facility and location of the boiler or industrial furnace;

(C) A description of the air pollution control system;

(D) Identification of the continuous emission monitors that are installed, including:

(I) Carbon monoxide monitor;

(II) Oxygen monitor;

(III) Hydrocarbon monitor, specifying the minimum temperature of the system and, if the temperature is less than 150 °C, an explanation of why a heated system is not used, see Subsection R315-266-103(c)(5), and a brief description of the sample gas conditioning system;

(E) Indication of whether the stack is shared with another device that will be in operation during the compliance test;

(F) Other information useful to an understanding of the system design or operation.

(iii) Information on the testing planned, including a complete copy of the test protocol and Quality Assurance/Quality Control (QA/QC) plan, and a summary description for each test providing the following information at a minimum:

(A) Purpose of the test, e.g., demonstrate compliance with emissions of particulate matter; and

(B) Planned operating conditions, including levels for each pertinent parameter specified in Subsection R315-266-103(c)(1).

(3) Compliance testing

(i) General. Compliance testing shall be conducted under conditions for which the owner or operator has submitted a certification of precompliance under Subsection R315-266-103(b) and under conditions established in the notification of compliance testing required by Subsection R315-266-103(c)(2). The owner or operator may seek approval on a case-by-case basis to use compliance test data from one unit in lieu of testing a similar onsite unit. To support the request, the owner or operator shall provide a comparison of the hazardous waste burned and other feedstreams, and the design, operation, and maintenance of both the tested unit and the similar unit. The Director shall provide a written approval to use compliance test data in lieu of testing a similar unit if he finds that the hazardous wastes, the devices, and the operating conditions are sufficiently similar, and the data from the other compliance test is adequate to meet the requirements of Subsection R315-266-103(c).

(ii) Special requirements for industrial furnaces that recycle collected PM. Owners and operators of industrial furnaces that recycle back into the furnace particulate matter (PM) from the air pollution control system shall comply with one of the following procedures for testing to determine compliance with the metals standards of Subsections R315-266-

106(c) or (d):

(A) The special testing requirements prescribed in "Alternative Method for Implementing Metals Controls" in appendix IX of Rule R315-266; or

(B) Stack emissions testing for a minimum of 6 hours each day while hazardous waste is burned during interim status. The testing shall be conducted when burning normal hazardous waste for that day at normal feed rates for that day and when the air pollution control system is operated under normal conditions. During interim status, hazardous waste analysis for metals content shall be sufficient for the owner or operator to determine if changes in metals content may affect the ability of the facility to meet the metals emissions standards established under Subsections R315-266-106(c) or (d). Under this option, operating limits, under Subsection R315-266-103(c)(1), shall be established during compliance testing under Subsection R315-266-103(c)(3) only on the following parameters;

(I) Feed rate of total hazardous waste;

(II) Total feed rate of chlorine and chloride in total feed streams;

(III) Total feed rate of ash in total feed streams, except that the ash feed rate for cement kilns and light-weight aggregate kilns is not limited;

(IV) Carbon monoxide concentration, and where required, hydrocarbon concentration in stack gas;

(V) Maximum production rate of the device in appropriate units when producing normal product; or

(C) Conduct compliance testing to determine compliance with the metals standards to establish limits on the operating parameters of Subsection R315-266-103(c)(1) only after the kiln system has been conditioned to enable it to reach equilibrium with respect to metals fed into the system and metals emissions. During conditioning, hazardous waste and raw materials having the same metals content as will be fed during the compliance test shall be fed at the feed rates that will be fed during the compliance test.

(iii) Conduct of compliance testing.

(A) If compliance with all applicable emissions standards of Sections R315-266-104 through 107 is not demonstrated simultaneously during a set of test runs, the operating conditions of additional test runs required to demonstrate compliance with remaining emissions standards shall be as close as possible to the original operating conditions.

(B) Prior to obtaining test data for purposes of demonstrating compliance with the applicable emissions standards of Sections R315-266-104 through 107 or establishing limits on operating parameters under Section R315-266-103, the facility shall operate under compliance test conditions for a sufficient period to reach steady-state operations. Industrial furnaces that recycle collected particulate matter back into the furnace and that comply with Subsections R315-266-103(c)(3)(ii)(A) or (B), however, need not reach steady state conditions with respect to the flow of metals in the system prior to beginning compliance testing for metals.

(C) Compliance test data on the level of an operating parameter for which a limit shall be established in the certification of compliance shall be obtained during emissions sampling for the pollutant(s), i.e., metals, PM, HCl/C12, organic compounds, for which the parameter shall be established as specified by Subsection R315-266-103(c)(1).

(4) Certification of compliance. Within 90 days of completing compliance testing, the owner or operator shall certify to the Director compliance with the emissions standards of Subsections R315-266-104 (b), (c), and (e), and Sections R315-266-105, 106, and 107, and Subsection R315-266-103(a)(5)(i)(D). The certification of compliance shall include the following information:

(i) General facility and testing information including:

(A) EPA facility ID number;

(B) Facility name, contact person, telephone number, and address;

(C) Person responsible for conducting compliance testing, including company name, address, and telephone number, and a statement of qualifications;

(D) Date(s) of each compliance test;

(E) Description of boiler or industrial furnace tested;

(F) Person responsible for quality assurance/quality control (QA/QC), title, and telephone number, and statement that procedures prescribed in the QA/QC plan submitted under Subsection R315-266-103(c)(2)(iii) have been followed, or a description of any changes and an explanation of why changes were necessary.

(G) Description of any changes in the unit configuration prior to or during testing that would alter any of the information submitted in the prior notice of compliance testing under Subsection R315-266-103(c)(2), and an explanation of why the changes were necessary;

(H) Description of any changes in the planned test conditions prior to or during the testing that alter any of the information submitted in the prior notice of compliance testing under Subsection R315-266-103(c)(2), and an explanation of why the changes were necessary; and

(I) The complete report on results of emissions testing.

(ii) Specific information on each test including:

(A) Purpose(s) of test, e.g., demonstrate conformance with the emissions limits for particulate matter, metals, HCl, Cl₂, and CO;

(B) Summary of test results for each run and for each test including the following information:

(I) Date of run;

(II) Duration of run;

(III) Time-weighted average and highest hourly rolling average CO level for each run and for the test;

(IV) Highest hourly rolling average HC level, if HC monitoring is required for each run and for the test;

(V) If dioxin and furan testing is required under Subsection R315-266-104(e), time-weighted average emissions for each run and for the test of chlorinated dioxin and furan emissions, and the predicted maximum annual average ground level concentration of the toxicity equivalency factor;

(VI) Time-weighted average particulate matter emissions for each run and for the test;

(VII) Time-weighted average HCl and Cl₂ emissions for each run and for the test;

(VIII) Time-weighted average emissions for the metals subject to regulation under Subsection R315-266-106 for each run and for the test; and

(IX) QA/QC results.

(iii) Comparison of the actual emissions during each test with the emissions limits prescribed by Subsections R315-266-104(b), (c), and (e), and Sections R315-266-105, through 107 and established for the facility in the certification of precompliance under Subsection R315-266-103(b).

(iv) Determination of operating limits based on all valid runs of the compliance test for each applicable parameter listed in Subsection R315-266-103(c)(1) using either of the following procedures:

(A) Instantaneous limits. A parameter may be measured and recorded on an instantaneous basis, i.e., the value that occurs at any time, and the operating limit specified as the time-weighted average during all runs of the compliance test; or

(B) Hourly rolling average basis. The limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:

(I) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60

seconds; and

(II) An hourly rolling average is the arithmetic mean of the 60 most recent 1-minute average values recorded by the continuous monitoring system.

(III) The operating limit for the parameter shall be established based on compliance test data as the average over all test runs of the highest hourly rolling average value for each run.

(C) Rolling average limits for carcinogenic metals and lead. Feed rate limits for the carcinogenic metals, i.e., arsenic, beryllium, cadmium and chromium, and lead may be established either on an hourly rolling average basis as prescribed by Subsection R315-266-103(c)(4)(iv)(B) or on, up to, a 24 hour rolling average basis. If the owner or operator elects to use an averaging period from 2 to 24 hours:

(I) The feed rate of each metal shall be limited at any time to ten times the feed rate that would be allowed on an hourly rolling average basis;

(II) The continuous monitor shall meet the following specifications:

(i) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

(ii) The rolling average for the selected averaging period is defined as arithmetic mean of one hour block averages for the averaging period. A one hour block average is the arithmetic mean of the one minute averages recorded during the 60-minute period beginning at one minute after the beginning of preceding clock hour; and

(III) The operating limit for the feed rate of each metal shall be established based on compliance test data as the average over all test runs of the highest hourly rolling average feed rate for each run.

(D) Feed rate limits for metals, total chloride and chlorine, and ash. Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance, i.e., metals, chloride/chlorine, and ash, in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream shall be monitored under the continuous monitoring requirements of Subsections R315-266-103(c)(4)(iv)(A) through (C).

(v) Certification of compliance statement. The following statement shall accompany the certification of compliance:

"I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation. Copies of all emissions tests, dispersion modeling results and other information used to determine conformance with the requirements of Subsection R315-266-103(c) are available at the facility and can be obtained from the facility contact person listed above. Based on my inquiry of the person or persons who manages the facility, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also acknowledge that the operating conditions established in this certification pursuant to Subsection R315-266-103(c)(4)(iv) are enforceable limits at which the facility can legally operate during interim status until a revised certification of compliance is submitted."

(5) Special requirements for HC monitoring systems. When an owner or operator is required to comply with the hydrocarbon (HC) controls provided by Subsections R315-266-

104(c) or 103(a)(5)(i)(D), a conditioned gas monitoring system may be used in conformance with specifications provided in appendix IX of Rule R315-266 provided that the owner or operator submits a certification of compliance without using extensions of time provided by Subsection R315-266-103(c)(7).

(6) Special operating requirements for industrial furnaces that recycle collected PM. Owners and operators of industrial furnaces that recycle back into the furnace particulate matter (PM) from the air pollution control system shall:

(i) When complying with the requirements of Subsection R315-266-103(c)(3)(ii)(A), comply with the operating requirements prescribed in "Alternative Method to Implement the Metals Controls" in appendix IX of Rule R315-266; and

(ii) When complying with the requirements of Subsection R315-266-103(c)(3)(ii)(B), comply with the operating requirements prescribed by Subsection R315-266-103(c).

(7) Extensions of time.

(i) If the owner or operator does not submit a complete certification of compliance for all of the applicable emissions standards of Sections R315-266-104, through 107 by August 21, 1992, he/she shall either:

(A) Stop burning hazardous waste and begin closure activities under Subsection R315-266-103(l) for the hazardous waste portion of the facility; or

(B) Limit hazardous waste burning only for purposes of compliance testing, and pretesting to prepare for compliance testing, a total period of 720 hours for the period of time beginning August 21, 1992, submit a notification to the Director by August 21, 1992 stating that the facility is operating under restricted interim status and intends to resume burning hazardous waste, and submit a complete certification of compliance by August 23, 1993; or

(C) Obtain a case-by-case extension of time under Subsection R315-266-103(c)(7)(ii).

(ii) The owner or operator may request a case-by-case extension of time to extend any time limit provided by Subsection R315-266-103(c) if compliance with the time limit is not practicable for reasons beyond the control of the owner or operator.

(A) In granting an extension, the Director may apply conditions as the facts warrant to ensure timely compliance with the requirements of Section R315-266-103 and that the facility operates in a manner that does not pose a hazard to human health and the environment;

(B) When an owner or operator requests an extension of time to enable the facility to comply with the alternative hydrocarbon provisions of Subsection R315-266-104(f) and obtain a RCRA operating permit because the facility cannot meet the HC limit of Subsection R315-266-104(c):

(1) The Director shall, in considering whether to grant the extension:

(i) Determine whether the owner and operator have submitted in a timely manner a complete part B permit application that includes information required under Subsection R315-270-22(b); and

(ii) Consider whether the owner and operator have made a good faith effort to certify compliance with all other emission controls, including the controls on dioxins and furans of Subsection R315-266-104(e) and the controls on PM, metals, and HCl/Cl₂.

(2) If an extension is granted, the Director shall, as a condition of the extension, require the facility to operate under flue gas concentration limits on CO and HC that, based on available information, including information in the part B permit application, are baseline CO and HC levels as defined by Subsection R315-266-104(f)(1).

(8) Revised certification of compliance. The owner or operator may submit at any time a revised certification of compliance, recertification of compliance, under the following

procedures:

(i) Prior to submittal of a revised certification of compliance, hazardous waste may not be burned for more than a total of 720 hours under operating conditions that exceed those established under a current certification of compliance, and such burning may be conducted only for purposes of determining whether the facility can operate under revised conditions and continue to meet the applicable emissions standards of Sections R315-266-104 through 107;

(ii) At least 30 days prior to first burning hazardous waste under operating conditions that exceed those established under a current certification of compliance, the owner or operator shall notify the Director and submit the following information:

(A) EPA facility ID number, and facility name, contact person, telephone number, and address;

(B) Operating conditions that the owner or operator is seeking to revise and description of the changes in facility design or operation that prompted the need to seek to revise the operating conditions;

(C) A determination that when operating under the revised operating conditions, the applicable emissions standards of Sections R315-266-104 through 107 are not likely to be exceeded. To document this determination, the owner or operator shall submit the applicable information required under Subsection R315-266-103(b)(2); and

(D) Complete emissions testing protocol for any pretesting and for a new compliance test to determine compliance with the applicable emissions standards of Sections R315-266-104 through 107 when operating under revised operating conditions. The protocol shall include a schedule of pre-testing and compliance testing. If the owner and operator revises the scheduled date for the compliance test, he/she shall notify the Director in writing at least 30 days prior to the revised date of the compliance test;

(iii) Conduct a compliance test under the revised operating conditions and the protocol submitted to the Director to determine compliance with the applicable emissions standards of Sections R315-266-104 through 107; and

(iv) Submit a revised certification of compliance under Subsection R315-266-103(c)(4).

(d) Periodic Recertifications. The owner or operator shall conduct compliance testing and submit to the Director a recertification of compliance under provisions of Subsection R315-266-103(c) within five years from submitting the previous certification or recertification. If the owner or operator seeks to recertify compliance under new operating conditions, he/she shall comply with the requirements of Subsection R315-266-103(c)(8).

(e) Noncompliance with certification schedule. If the owner or operator does not comply with the interim status compliance schedule provided by Subsections R315-266-103(b), (c), and (d), hazardous waste burning shall terminate on the date that the deadline is missed, closure activities shall begin under Subsection R315-266-103(l), and hazardous waste burning may not resume except under an operating permit issued under Section R315-270-66. For purposes of compliance with the closure provisions of Subsection R315-266-103(l) and 40 CFR 265.112(d)(2) and 113, which are adopted by reference, the boiler or industrial furnace has received "the known final volume of hazardous waste" on the date that the deadline is missed.

(f) Start-up and shut-down. Hazardous waste, except waste fed solely as an ingredient under the Tier I, or adjusted Tier I, feed rate screening limits for metals and chloride/chlorine, shall not be fed into the device during start-up and shut-down of the boiler or industrial furnace, unless the device is operating within the conditions of operation specified in the certification of compliance.

(g) Automatic waste feed cutoff. During the compliance

test required by Subsection R315-266-103(c)(3), and upon certification of compliance under Subsection R315-266-103(c), a boiler or industrial furnace shall be operated with a functioning system that automatically cuts off the hazardous waste feed when the applicable operating conditions specified in Subsections R315-266-103(c)(1)(i) and (v) through (xiii) deviate from those established in the certification of compliance. In addition:

(1) To minimize emissions of organic compounds, the minimum combustion chamber temperature, or the indicator of combustion chamber temperature, that occurred during the compliance test shall be maintained while hazardous waste or hazardous waste residues remain in the combustion chamber, with the minimum temperature during the compliance test defined as either:

(i) If compliance with the combustion chamber temperature limit is based on an hourly rolling average, the minimum temperature during the compliance test is considered to be the average over all runs of the lowest hourly rolling average for each run; or

(ii) If compliance with the combustion chamber temperature limit is based on an instantaneous temperature measurement, the minimum temperature during the compliance test is considered to be the time-weighted average temperature during all runs of the test; and

(2) Operating parameters limited by the certification of compliance shall continue to be monitored during the cutoff, and the hazardous waste feed shall not be restarted until the levels of those parameters comply with the limits established in the certification of compliance.

(h) Fugitive emissions. Fugitive emissions shall be controlled by:

(1) Keeping the combustion zone totally sealed against fugitive emissions; or

(2) Maintaining the combustion zone pressure lower than atmospheric pressure; or

(3) An alternate means of control that the owner or operator can demonstrate provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure. Support for such demonstration shall be included in the operating record.

(i) Changes. A boiler or industrial furnace shall cease burning hazardous waste when changes in combustion properties, or feed rates of the hazardous waste, other fuels, or industrial furnace feedstocks, or changes in the boiler or industrial furnace design or operating conditions deviate from the limits specified in the certification of compliance.

(j) Monitoring and Inspections.

(1) The owner or operator shall monitor and record the following, at a minimum, while burning hazardous waste:

(i) Feed rates and composition of hazardous waste, other fuels, and industrial furnace feed stocks, and feed rates of ash, metals, and total chloride and chlorine as necessary to ensure conformance with the certification of precompliance or certification of compliance;

(ii) Carbon monoxide (CO), oxygen, and if applicable, hydrocarbons (HC), on a continuous basis at a common point in the boiler or industrial furnace downstream of the combustion zone and prior to release of stack gases to the atmosphere in accordance with the operating limits specified in the certification of compliance. CO, HC, and oxygen monitors shall be installed, operated, and maintained in accordance with methods specified in appendix IX of Rule R315-266.

(iii) Upon the request of the Director, sampling and analysis of the hazardous waste, and other fuels and industrial furnace feed stocks as appropriate, and the stack gas emissions shall be conducted to verify that the operating conditions established in the certification of precompliance or certification of compliance achieve the applicable standards of Sections

R315-266-104 through 107.

(2) The boiler or industrial furnace and associated equipment, pumps, valves, pipes, fuel storage tanks, etc., shall be subjected to thorough visual inspection when they contain hazardous waste, at least daily for leaks, spills, fugitive emissions, and signs of tampering.

(3) The automatic hazardous waste feed cutoff system and associated alarms shall be tested at least once every 7 days when hazardous waste is burned to verify operability, unless the owner or operator can demonstrate that weekly inspections will unduly restrict or upset operations and that less frequent inspections will be adequate. Support for such demonstration shall be included in the operating record. At a minimum, operational testing shall be conducted at least once every 30 days.

(4) These monitoring and inspection data shall be recorded and the records shall be placed in the operating log.

(k) Recordkeeping. The owner or operator shall keep in the operating record of the facility all information and data required by Section R315-266-103 for five years.

(l) Closure. At closure, the owner or operator shall remove all hazardous waste and hazardous waste residues, including, but not limited to, ash, scrubber waters, and scrubber sludges, from the boiler or industrial furnace and shall comply with 40 CFR 265.111 through 115, which are adopted by reference.

R315-266-104. Hazardous Waste Burned in Boilers and Industrial Furnaces -- Standards to Control Organic Emissions.

(a) DRE standard

(1) General. Except as provided in Subsection R315-266-104(a)(3), a boiler or industrial furnace burning hazardous waste shall achieve a destruction and removal efficiency (DRE) of 99.99% for all organic hazardous constituents in the waste feed. To demonstrate conformance with this requirement, 99.99% DRE shall be demonstrated during a trial burn for each principal organic hazardous constituent (POHC) designated, under Subsection R315-266-104(a)(2), in its permit for each waste feed. DRE is determined for each POHC from the following equation:

$$DRE = (1 - W_{out}/W_{in}) \times 100$$

where:

W_{in} = Mass feed rate of one principal organic hazardous constituent (POHC) in the hazardous waste fired to the boiler or industrial furnace; and

W_{out} = Mass emission rate of the same POHC present in stack gas prior to release to the atmosphere.

(2) Designation of POHCs. Principal organic hazardous constituents (POHCs) are those compounds for which compliance with the DRE requirements of Section R315-266-104 shall be demonstrated in a trial burn in conformance with procedures prescribed in Section R315-270-66. One or more POHCs shall be designated by the Director for each waste feed to be burned. POHCs shall be designated based on the degree of difficulty of destruction of the organic constituents in the waste and on their concentrations or mass in the waste feed considering the results of waste analyses submitted with part B of the permit application. POHCs are most likely to be selected from among those compounds listed in Rule R315-261, appendix VIII that are also present in the normal waste feed. However, if the applicant demonstrates to the Director's satisfaction that a compound not listed in Rule R315-261, appendix VIII or not present in the normal waste feed is a suitable indicator of compliance with the DRE requirements of Section R315-266-104, that compound may be designated as a POHC. Such POHCs need not be toxic or organic compounds.

(3) Dioxin-listed waste. A boiler or industrial furnace burning hazardous waste containing, or derived from, EPA

Hazardous Wastes Nos. F020, F021, F022, F023, F026, or F027 shall achieve a destruction and removal efficiency (DRE) of 99.9999% for each POHC designated, under Subsection R315-266-104(a)(2), in its permit. This performance shall be demonstrated on POHCs that are more difficult to burn than tetra-, penta-, and hexachlorodibenzo-p-dioxins and dibenzofurans. DRE is determined for each POHC from the equation in Subsection R315-266-104(a)(1). In addition, the owner or operator of the boiler or industrial furnace shall notify the Director of intent to burn EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, or F027.

(4) Automatic waiver of DRE trial burn. Owners and operators of boilers operated under the special operating requirements provided by Section R315-266-110 are considered to be in compliance with the DRE standard of Subsection R315-266-104(a)(1) and are exempt from the DRE trial burn.

(5) Low risk waste. Owners and operators of boilers or industrial furnaces that burn hazardous waste in compliance with the requirements of Subsection R315-266-109(a) are considered to be in compliance with the DRE standard of Subsection R315-266-104(a)(1) and are exempt from the DRE trial burn.

(b) Carbon monoxide standard.

(1) Except as provided in Subsection R315-266-104(c), the stack gas concentration of carbon monoxide (CO) from a boiler or industrial furnace burning hazardous waste cannot exceed 100 ppmv on an hourly rolling average basis, i.e., over any 60 minute period, continuously corrected to 7 percent oxygen, dry gas basis.

(2) CO and oxygen shall be continuously monitored in conformance with "Performance Specifications for Continuous Emission Monitoring of Carbon Monoxide and Oxygen for Incinerators, Boilers, and Industrial Furnaces Burning Hazardous Waste" in appendix IX of Rule R315-266.

(3) Compliance with the 100 ppmv CO limit shall be demonstrated during the trial burn, for new facilities or an interim status facility applying for a permit, or the compliance test, for interim status facilities. To demonstrate compliance, the highest hourly rolling average CO level during any valid run of the trial burn or compliance test shall not exceed 100 ppmv.

(c) Alternative carbon monoxide standard.

(1) The stack gas concentration of carbon monoxide (CO) from a boiler or industrial furnace burning hazardous waste may exceed the 100 ppmv limit provided that stack gas concentrations of hydrocarbons (HC) do not exceed 20 ppmv, except as provided by Subsection R315-266-104(f) for certain industrial furnaces.

(2) HC limits shall be established under Section R315-266-104 on an hourly rolling average basis, i.e., over any 60 minute period, reported as propane, and continuously corrected to 7 percent oxygen, dry gas basis.

(3) HC shall be continuously monitored in conformance with "Performance Specifications for Continuous Emission Monitoring of Hydrocarbons for Incinerators, Boilers, and Industrial Furnaces Burning Hazardous Waste" in appendix IX of Rule R315-266. CO and oxygen shall be continuously monitored in conformance with Subsection R315-266-104(b)(2).

(4) The alternative CO standard is established based on CO data during the trial burn, for a new facility, and the compliance test, for an interim status facility. The alternative CO standard is the average over all valid runs of the highest hourly rolling average CO level for each run. The CO limit is implemented on an hourly rolling average basis, and continuously corrected to 7 percent oxygen, dry gas basis.

(d) Special requirements for furnaces. Owners and operators of industrial furnaces, e.g., kilns or cupolas, that feed hazardous waste for a purpose other than solely as an ingredient, see Section R315-266-103(a)(5)(ii), at any location other than

the end where products are normally discharged and where fuels are normally fired shall comply with the hydrocarbon limits provided by Subsections R315-266-104(c) or (f) irrespective of whether stack gas CO concentrations meet the 100 ppmv limit of Subsection R315-266-104(b).

(e) Controls for dioxins and furans. Owners and operators of boilers and industrial furnaces that are equipped with a dry particulate matter control device that operates within the temperature range of 450-750 °F, and industrial furnaces operating under an alternative hydrocarbon limit established under Subsection R315-266-104(f) shall conduct a site-specific risk assessment as follows to demonstrate that emissions of chlorinated dibenzo-p-dioxins and dibenzofurans do not result in an increased lifetime cancer risk to the hypothetical maximum exposed individual (MEI) exceeding 1 in 100,000:

(1) During the trial burn, for new facilities or an interim status facility applying for a permit, or compliance test, for interim status facilities, determine emission rates of the tetra- to octa congeners of chlorinated dibenzo-p-dioxins and dibenzofurans (CDDs/CDFs) using Method 0023A, Sampling Method for Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans Emissions from Stationary Sources, EPA Publication SW-846, as incorporated by reference in Section R315-260-11.

(2) Estimate the 2,3,7,8-TCDD toxicity equivalence of the tetra- to octa CDDs/CDFs congeners using "Procedures for Estimating the Toxicity Equivalence of Chlorinated Dibenzo-p-Dioxin and Dibenzofuran Congeners" in appendix IX of Rule R315-266. Multiply the emission rates of CDD/CDF congeners with a toxicity equivalence greater than zero, see the procedure, by the calculated toxicity equivalence factor to estimate the equivalent emission rate of 2,3,7,8-TCDD;

(3) Conduct dispersion modeling using methods recommended in appendix W of 40 CFR 51 ("Guideline on Air Quality Models (Revised)" (1986) and its supplements), the "Hazardous Waste Combustion Air Quality Screening Procedure", provided in appendix IX of Rule R315-266, or in Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised, incorporated by reference in R315-260-11, to predict the maximum annual average off-site ground level concentration of 2,3,7,8-TCDD equivalents determined under Subsection R315-266-104(e)(2). The maximum annual average concentration shall be used when a person resides on-site; and

(4) The ratio of the predicted maximum annual average ground level concentration of 2,3,7,8-TCDD equivalents to the risk-specific dose for 2,3,7,8-TCDD provided in appendix V of Rule R315-266, 2.2×10^{-7} , shall not exceed 1.0.

(f) Monitoring CO and HC in the by-pass duct of a cement kiln. Cement kilns may comply with the carbon monoxide and hydrocarbon limits provided by Subsections R315-266-104(b), (c), and (d) by monitoring in the by-pass duct provided that:

(1) Hazardous waste is fired only into the kiln and not at any location downstream from the kiln exit relative to the direction of gas flow; and

(2) The by-pass duct diverts a minimum of 10% of kiln off-gas into the duct.

(g) Use of emissions test data to demonstrate compliance and establish operating limits. Compliance with the requirements of Section R315-266-104 shall be demonstrated simultaneously by emissions testing or during separate runs under identical operating conditions. Further, data to demonstrate compliance with the CO and HC limits of Section R315-266-104 or to establish alternative CO or HC limits under Section R315-266-104 shall be obtained during the time that DRE testing, and where applicable, CDD/CDF testing under Subsection R315-266-104(e) and comprehensive organic emissions testing under Subsection R315-266-104(f) is conducted.

(h) Enforcement. For the purposes of permit enforcement, compliance with the operating requirements specified in the permit, under Section R315-266-102, shall be regarded as compliance with Section R315-266-104. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of Section R315-266-104 may be "information" justifying modification or revocation and re-issuance of a permit under Section R315-270-41.

R315-266-105. Hazardous Waste Burned in Boilers and Industrial Furnaces -- Standards to Control Particulate Matter.

(a) A boiler or industrial furnace burning hazardous waste may not emit particulate matter in excess of 180 milligrams per dry standard cubic meter, 0.08 grains per dry standard cubic foot, after correction to a stack gas concentration of 7% oxygen, using procedures prescribed in 40 CFR part 60, appendix A, methods 1 through 5, and appendix IX of Rule R315-266.

(b) An owner or operator meeting the requirements of Subsection Rule R315-266-109(b) for the low risk waste exemption is exempt from the particulate matter standard.

(c) Oxygen correction.

(1) Measured pollutant levels shall be corrected for the amount of oxygen in the stack gas according to the formula:

$$P_c = P_m \times 14 / (E - Y)$$

Where:

P_c is the corrected concentration of the pollutant in the stack gas, P_m is the measured concentration of the pollutant in the stack gas, E is the oxygen concentration on a dry basis in the combustion air fed to the device, and Y is the measured oxygen concentration on a dry basis in the stack.

(2) For devices that feed normal combustion air, E will equal 21 percent. For devices that feed oxygen-enriched air for combustion, that is, air with an oxygen concentration exceeding 21 percent, the value of E will be the concentration of oxygen in the enriched air.

(3) Compliance with all emission standards provided by Sections R315-266-100 through 112 shall be based on correcting to 7 percent oxygen using this procedure.

(d) For the purposes of permit enforcement, compliance with the operating requirements specified in the permit, under Section R315-266-102, shall be regarded as compliance with Section R315-266-105. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of Section R315-266-105 may be "information" justifying modification or revocation and re-issuance of a permit under Section R315-270-41.

R315-266-106. Hazardous Waste Burned in Boilers and Industrial Furnaces -- Standards to Control Metals Emissions.

(a) General. The owner or operator shall comply with the metals standards provided by Subsections R315-266-106(b), (c), (d), (e), or (f) for each metal listed in Subsection R315-266-106(b) that is present in the hazardous waste at detectable levels by using appropriate analytical procedures.

(b) Tier I feed rate screening limits. Feed rate screening limits for metals are specified in appendix I of Rule R315-266 as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. Criteria for facilities that are not eligible to comply with the screening limits are provided in Subsection R315-266-106(b)(7).

(1) Noncarcinogenic metals. The feed rates of antimony, barium, lead, mercury, thallium, and silver in all feed streams, including hazardous waste, fuels, and industrial furnace feed stocks shall not exceed the screening limits specified in appendix I of Rule R315-266.

(i) The feed rate screening limits for antimony, barium, mercury, thallium, and silver are based on either:

(A) An hourly rolling average as defined in Subsection R315-266-102(e)(6)(i)(B); or

(B) An instantaneous limit not to be exceeded at any time.

(ii) The feed rate screening limit for lead is based on one of the following:

(A) An hourly rolling average as defined in Subsection R315-266-102(e)(6)(i)(B);

(B) An averaging period of 2 to 24 hours as defined in Subsection R315-266-102(e)(6)(ii) with an instantaneous feed rate limit not to exceed 10 times the feed rate that would be allowed on an hourly rolling average basis; or

(C) An instantaneous limit not to be exceeded at any time.

(2) Carcinogenic metals.

(i) The feed rates of arsenic, cadmium, beryllium, and chromium in all feed streams, including hazardous waste, fuels, and industrial furnace feed stocks shall not exceed values derived from the screening limits specified in appendix I of Rule R315-266. The feed rate of each of these metals is limited to a level such that the sum of the ratios of the actual feed rate to the feed rate screening limit specified in appendix I shall not exceed 1.0, as provided by the following equation:

The summation of $AFR_{(i)} / FRSL_{(i)}$ for $i = 1$ to n is less than or equal to 1.0

where:

n = number of carcinogenic metals

AFR = actual feed rate to the device for metal "i"

$FRSL$ = feed rate screening limit provided by appendix I of Rule R315-266 for metal "i".

(ii) The feed rate screening limits for the carcinogenic metals are based on either:

(A) An hourly rolling average; or

(B) An averaging period of 2 to 24 hours as defined in Subsection R315-266-102(e)(6)(ii) with an instantaneous feed rate limit not to exceed 10 times the feed rate that would be allowed on an hourly rolling average basis.

(3) TESH.

(i) The terrain-adjusted effective stack height is determined according to the following equation:

$$TESH = Ha + H1 - Tr$$

where:

Ha = Actual physical stack height

$H1$ = Plume rise as determined from appendix VI of Rule R315-266 as a function of stack flow rate and stack gas exhaust temperature.

Tr = Terrain rise within five kilometers of the stack.

(ii) The stack height (Ha) may not exceed good engineering practice as specified in 40 CFR 51.100(ii).

(iii) If the TESH for a particular facility is not listed in the table in the appendices, the nearest lower TESH listed in the table shall be used. If the TESH is four meters or less, a value of four meters shall be used.

(4) Terrain type. The screening limits are a function of whether the facility is located in noncomplex or complex terrain. A device located where any part of the surrounding terrain within 5 kilometers of the stack equals or exceeds the elevation of the physical stack height (Ha) is considered to be in complex terrain and the screening limits for complex terrain apply. Terrain measurements are to be made from U.S. Geological Survey 7.5-minute topographic maps of the area surrounding the facility.

(5) Land use. The screening limits are a function of whether the facility is located in an area where the land use is urban or rural. To determine whether land use in the vicinity of the facility is urban or rural, procedures provided in appendices IX or X of Rule R315-266 shall be used.

(6) Multiple stacks. Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls of metals emissions under a RCRA operating permit or

interim status controls shall comply with the screening limits for all such units assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics. The worst-case stack is determined from the following equation as applied to each stack:

$$K = HVT$$

Where:

K = a parameter accounting for relative influence of stack height and plume rise;

H = physical stack height (meters);

V = stack gas flow rate (m³/second); and

T = exhaust temperature (deg. K).

The stack with the lowest value of K is the worst-case stack.

(7) Criteria for facilities not eligible for screening limits. If any criteria below are met, the Tier I and Tier II screening limits do not apply. Owners and operators of such facilities shall comply with either the Tier III standards provided by Subsection R315-266-106(d) or with the adjusted Tier I feed rate screening limits provided by Subsection R315-266-106(e).

(i) The device is located in a narrow valley less than one kilometer wide;

(ii) The device has a stack taller than 20 meters and is located such that the terrain rises to the physical height within one kilometer of the facility;

(iii) The device has a stack taller than 20 meters and is located within five kilometers of a shoreline of a large body of water such as an ocean or large lake;

(iv) The physical stack height of any stack is less than 2.5 times the height of any building within five building heights or five projected building widths of the stack and the distance from the stack to the closest boundary is within five building heights or five projected building widths of the associated building; or

(v) The Director determines that standards based on site-specific dispersion modeling are required.

(8) Implementation. The feed rate of metals in each feedstream shall be monitored to ensure that the feed rate screening limits are not exceeded.

(c) Tier II emission rate screening limits. Emission rate screening limits are specified in appendix I as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. Criteria for facilities that are not eligible to comply with the screening limits are provided in Subsection R315-266-106(b)(7).

(1) Noncarcinogenic metals. The emission rates of antimony, barium, lead, mercury, thallium, and silver shall not exceed the screening limits specified in appendix I of Rule R315-266.

(2) Carcinogenic metals. The emission rates of arsenic, cadmium, beryllium, and chromium shall not exceed values derived from the screening limits specified in appendix I of Rule R315-266. The emission rate of each of these metals is limited to a level such that the sum of the ratios of the actual emission rate to the emission rate screening limit specified in appendix I shall not exceed 1.0, as provided by the following equation:

The summation of $AER_{(i)}/ERSL_{(i)}$ for $i = 1$ to n is less than or equal to 1.0

where:

n = number of carcinogenic metals

AER = actual emission rate for metal "i"

ERSL = emission rate screening limit provided by appendix I of Rule R315-266 for metal "i".

(3) Implementation. The emission rate limits shall be implemented by limiting feed rates of the individual metals to levels during the trial burn, for new facilities or an interim status facility applying for a permit, or the compliance test, for interim status facilities. The feed rate averaging periods are the same as provided by Subsections R315-266-106(b)(1)(i) and (ii) and (b)(2)(ii). The feed rate of metals in each feedstream shall be

monitored to ensure that the feed rate limits for the feedstreams specified under Sections R315-266-102 or 103 are not exceeded.

(4) Definitions and limitations. The definitions and limitations provided by Subsection R315-266-106(b) for the following terms also apply to the Tier II emission rate screening limits provided by Subsection R315-266-106(c): terrain-adjusted effective stack height, good engineering practice stack height, terrain type, land use, and criteria for facilities not eligible to use the screening limits.

(5) Multiple stacks.

(i) Owners and operators of facilities with more than one onsite stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on metals emissions under a RCRA operating permit or interim status controls shall comply with the emissions screening limits for any such stacks assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics.

(ii) The worst-case stack is determined by procedures provided in Subsection R315-266-106(b)(6).

(iii) For each metal, the total emissions of the metal from those stacks shall not exceed the screening limit for the worst-case stack.

(d) Tier III and Adjusted Tier I site-specific risk assessment. The requirements of Subsection R315-266-106(d) apply to facilities complying with either the Tier III or Adjusted Tier I controls, except where specified otherwise.

(1) General. Conformance with the Tier III metals controls shall be demonstrated by emissions testing to determine the emission rate for each metal. In addition, conformance with either the Tier III or Adjusted Tier I metals controls shall be demonstrated by air dispersion modeling to predict the maximum annual average off-site ground level concentration for each metal, and a demonstration that acceptable ambient levels are not exceeded.

(2) Acceptable ambient levels. Appendices IV and V of Rule R315-266 list the acceptable ambient levels for purposes of Rule R315-266. Reference air concentrations (RACs) are listed for the noncarcinogenic metals and 10-5 risk-specific doses (RSDs) are listed for the carcinogenic metals. The RSD for a metal is the acceptable ambient level for that metal provided that only one of the four carcinogenic metals is emitted. If more than one carcinogenic metal is emitted, the acceptable ambient level for the carcinogenic metals is a fraction of the RSD as described in Subsection R315-266-106(d)(3).

(3) Carcinogenic metals. For the carcinogenic metals, arsenic, cadmium, beryllium, and chromium, the sum of the ratios of the predicted maximum annual average off-site ground level concentrations, except that on-site concentrations shall be considered if a person resides on site, to the risk-specific dose (RSD) for all carcinogenic metals emitted shall not exceed 1.0 as determined by the following equation:

The summation of Predicted Ambient Concentration_(i)/Risk-Specific Dose_(i) for $i = 1$ to n is less than or equal to 1.0

where: n = number of carcinogenic metals

(4) Noncarcinogenic metals. For the noncarcinogenic metals, the predicted maximum annual average off-site ground level concentration for each metal shall not exceed the reference air concentration (RAC).

(5) Multiple stacks. Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on metals emissions under a RCRA operating permit or interim status controls shall conduct emissions testing, except that facilities complying with Adjusted Tier I controls need not conduct emissions testing, and dispersion modeling to demonstrate that the aggregate emissions from all such on-site

stacks do not result in an exceedance of the acceptable ambient levels.

(6) Implementation. Under Tier III, the metals controls shall be implemented by limiting feed rates of the individual metals to levels during the trial burn, for new facilities or an interim status facility applying for a permit, or the compliance test, for interim status facilities. The feed rate averaging periods are the same as provided by Subsections R315-266-106(b)(1)(i) and (ii) and (b)(2)(ii). The feed rate of metals in each feedstream shall be monitored to ensure that the feed rate limits for the feedstreams specified under Sections R315-266-102 or 103 are not exceeded.

(e) Adjusted Tier I feed rate screening limits. The owner or operator may adjust the feed rate screening limits provided by appendix I of Rule R315-266 to account for site-specific dispersion modeling. Under this approach, the adjusted feed rate screening limit for a metal is determined by back-calculating from the acceptable ambient level provided by appendices IV and V of Rule R315-266 using dispersion modeling to determine the maximum allowable emission rate. This emission rate becomes the adjusted Tier I feed rate screening limit. The feed rate screening limits for carcinogenic metals are implemented as prescribed in Subsection R315-266-106(b)(2).

(f) Alternative implementation approaches.

(1) The Director may approve on a case-by-case basis approaches to implement the Tier II or Tier III metals emission limits provided by Subsections R315-266-106(c) or (d) alternative to monitoring the feed rate of metals in each feedstream.

(2) The emission limits provided by Subsection R315-266-106(d) shall be determined as follows:

(i) For each noncarcinogenic metal, by back-calculating from the RAC provided in appendix IV of Rule R315-266 to determine the allowable emission rate for each metal using the dilution factor for the maximum annual average ground level concentration predicted by dispersion modeling in conformance with Subsection R315-266-106(h); and

(ii) For each carcinogenic metal by:

(A) Back-calculating from the RSD provided in appendix V of Rule R315-266 to determine the allowable emission rate for each metal if that metal were the only carcinogenic metal emitted using the dilution factor for the maximum annual average ground level concentration predicted by dispersion modeling in conformance with Subsection R315-266-106(h); and

(B) If more than one carcinogenic metal is emitted, selecting an emission limit for each carcinogenic metal not to exceed the emission rate determined by Subsection R315-266-106(f)(2)(ii)(A) such that the sum for all carcinogenic metals of the ratios of the selected emission limit to the emission rate determined by Subsection R315-266-106(f)(2)(ii)(A) does not exceed 1.0.

(g) Emission testing

(1) General. Emission testing for metals shall be conducted using Method 0060, Determinations of Metals in Stack Emissions, EPA Publication SW-846, as incorporated by reference in Section R315-260-11.

(2) Hexavalent chromium. Emissions of chromium are assumed to be hexavalent chromium unless the owner or operator conducts emissions testing to determine hexavalent chromium emissions using procedures prescribed in Method 0061, Determination of Hexavalent Chromium Emissions from Stationary Sources, EPA Publication SW-846, as incorporated by reference in Section R315-260-11.

(h) Dispersion Modeling. Dispersion modeling required under Section R315-266-106 shall be conducted according to methods recommended in appendix W of 40 CFR 51, "Guideline on Air Quality Models (Revised)" (1986) and its

supplements, the "Hazardous Waste Combustion Air Quality Screening Procedure", provided in appendix IX of Rule R315-266, or in Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised, incorporated by reference in Section R315-260-11, to predict the maximum annual average off-site ground level concentration. However, on-site concentrations shall be considered when a person resides on-site.

(i) Enforcement. For the purposes of permit enforcement, compliance with the operating requirements specified in the permit, under Section R315-266-102, shall be regarded as compliance with Section R315-266-106. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of Section R315-266-106 may be "information" justifying modification or revocation and re-issuance of a permit under Section R315-270-41.

R315-266-107. Hazardous Waste Burned in Boilers and Industrial Furnaces -- Standards to Control Hydrogen Chloride (HCl) and Chlorine Gas (Cl₂) Emissions.

(a) General. The owner or operator shall comply with the hydrogen chloride (HCl) and chlorine (Cl₂) controls provided by Subsection R315-266-107(b), (c), or (e).

(b) Screening limits

(1) Tier I feed rate screening limits. Feed rate screening limits are specified for total chlorine in appendix II of Rule R315-266 as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. The feed rate of total chlorine and chloride, both organic and inorganic, in all feed streams, including hazardous waste, fuels, and industrial furnace feed stocks shall not exceed the levels specified.

(2) Tier II emission rate screening limits. Emission rate screening limits for HCl and Cl₂ are specified in appendix III of Rule R315-266 as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. The stack emission rates of HCl and Cl₂ shall not exceed the levels specified.

(3) Definitions and limitations. The definitions and limitations provided by Subsection R315-266-106(b) for the following terms also apply to the screening limits provided by Subsection R315-266-107(b): terrain-adjusted effective stack height, good engineering practice stack height, terrain type, land use, and criteria for facilities not eligible to use the screening limits.

(4) Multiple stacks. Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on HCl or Cl₂ emissions under a RCRA operating permit or interim status controls shall comply with the Tier I and Tier II screening limits for those stacks assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics.

(i) The worst-case stack is determined by procedures provided in Subsection R315-266-106(b)(6).

(ii) Under Tier I, the total feed rate of chlorine and chloride to all subject devices shall not exceed the screening limit for the worst-case stack.

(iii) Under Tier II, the total emissions of HCl and Cl₂ from all subject stacks shall not exceed the screening limit for the worst-case stack.

(c) Tier III site-specific risk assessments

(1) General. Conformance with the Tier III controls shall be demonstrated by emissions testing to determine the emission rate for HCl and Cl₂, air dispersion modeling to predict the maximum annual average off-site ground level concentration for each compound, and a demonstration that acceptable ambient levels are not exceeded.

(2) Acceptable ambient levels. Appendix IV of Rule

R315-266 lists the reference air concentrations (RACs) for HCl, 7 micrograms per cubic meter, and Cl₂, 0.4 micrograms per cubic meter.

(3) Multiple stacks. Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on HCl or Cl₂ emissions under a RCRA operating permit or interim status controls shall conduct emissions testing and dispersion modeling to demonstrate that the aggregate emissions from all such on-site stacks do not result in an exceedance of the acceptable ambient levels for HCl and Cl₂.

(d) Averaging periods. The HCl and Cl₂ controls are implemented by limiting the feed rate of total chlorine and chloride in all feedstreams, including hazardous waste, fuels, and industrial furnace feed stocks. Under Tier I, the feed rate of total chloride and chlorine is limited to the Tier I Screening Limits. Under Tier II and Tier III, the feed rate of total chloride and chlorine is limited to the feed rates during the trial burn, for new facilities or an interim status facility applying for a permit, or the compliance test, for interim status facilities). The feed rate limits are based on either:

(1) An hourly rolling average as defined in Section R315-266-102(e)(6); or

(2) An instantaneous basis not to be exceeded at any time.

(e) Adjusted Tier I feed rate screening limits. The owner or operator may adjust the feed rate screening limit provided by appendix II of Rule R315-266 to account for site-specific dispersion modeling. Under this approach, the adjusted feed rate screening limit is determined by back-calculating from the acceptable ambient level for Cl₂ provided by appendix IV of Rule R315-266 using dispersion modeling to determine the maximum allowable emission rate. This emission rate becomes the adjusted Tier I feed rate screening limit.

(f) Emissions testing. Emissions testing for HCl and Cl₂ shall be conducted using the procedures described in Methods 0050 or 0051, EPA Publication SW-846, as incorporated by reference in Section R315-260-11.

(g) Dispersion modeling. Dispersion modeling shall be conducted according to the provisions of Subsection R315-266-106(h).

(h) Enforcement. For the purposes of permit enforcement, compliance with the operating requirements specified in the permit, under Section R315-266-102, shall be regarded as compliance with Section R315-266-107. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of Section R315-266-107 may be "information" justifying modification or revocation and re-issuance of a permit under Section R315-270-41.

R315-266-108. Hazardous Waste Burned in Boilers and Industrial Furnaces -- Small Quantity On-Site Burner Exemption.

(a) Exempt quantities. Owners and operators of facilities that burn hazardous waste in an on-site boiler or industrial furnace are exempt from the requirements of Sections R315-266-100 through 112 provided that:

(1) The quantity of hazardous waste burned in a device for a calendar month does not exceed the limits provided in the following table based on the terrain-adjusted effective stack height as defined in Subsection R315-266-106(b)(3):

Terrain-adjusted effective (meters)	Allowable hazardous waste stack height of device burning rate(gallons/month)
0 to 3.9	0
4.0 to 5.9	13
6.0 to 7.9	18
8.0 to 9.9	27
10.0 to 11.9	40

12.0 to 13.9	48
14.0 to 15.9	59
16.0 to 17.9	69
18.0 to 19.9	76
20.0 to 21.9	84
22.0 to 23.9	93
24.0 to 25.9	100
26.0 to 27.9	110
28.0 to 29.9	130
30.0 to 34.9	140
35.0 to 39.9	170
40.0 to 44.9	210
45.0 to 49.9	260
50.0 to 54.9	330
55.0 to 59.9	400
60.0 to 64.9	490
65.0 to 69.9	610
70.0 to 74.9	680
75.0 to 79.9	760
80.0 to 84.9	850
85.0 to 89.9	960
90.0 to 94.9	1,100
95.0 to 99.9	1,200
100.0 to 104.9	1,300
105.0 to 109.9	1,500
110.0 to 114.9	1,700
115.0 or greater	1,900

(2) The maximum hazardous waste firing rate does not exceed at any time 1 percent of the total fuel requirements for the device, hazardous waste plus other fuel, on a total heat input or mass input basis, whichever results in the lower mass feed rate of hazardous waste.

(3) The hazardous waste has a minimum heating value of 5,000 Btu/lb, as generated; and

(4) The hazardous waste fuel does not contain, and is not derived from, EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, or F027.

(b) Mixing with nonhazardous fuels. If hazardous waste fuel is mixed with a nonhazardous fuel, the quantity of hazardous waste before such mixing is used to comply with Subsection R315-266-108(a).

(c) Multiple stacks. If an owner or operator burns hazardous waste in more than one on-site boiler or industrial furnace exempt under Section R315-266-108, the quantity limits provided by Subsection R315-266-108(a)(1) are implemented according to the following equation:

The summation of Actual Quantity Burned_i/Allowable quantity Burned_i for i = 1 to n is less than or equal to 1.0

where:

n means the number of stacks;

Actual Quantity Burned means the waste quantity burned per month in device "i";

Allowable Quantity Burned means the maximum allowable exempt quantity for stack "i" from the table in Subsection R315-266-108(a)(1).

Hazardous wastes that are subject to the special requirements for small quantity generators under Section R315-261-5 may be burned in an off-site device under the exemption provided by Section R315-266-108, but shall be included in the quantity determination for the exemption.

(d) Notification requirements. The owner or operator of facilities qualifying for the small quantity burner exemption under Section R315-266-108 shall provide a one-time signed, written notice to the Director indicating the following:

(1) The combustion unit is operating as a small quantity burner of hazardous waste;

(2) The owner and operator are in compliance with the requirements of Section R315-266-108; and

(3) The maximum quantity of hazardous waste that the facility may burn per month as provided by Subsection R315-266-108(a)(1).

(e) Recordkeeping requirements. The owner or operator shall maintain at the facility for at least three years sufficient records documenting compliance with the hazardous waste

quantity, firing rate, and heating value limits of Section R315-266-108. At a minimum, these records shall indicate the quantity of hazardous waste and other fuel burned in each unit per calendar month, and the heating value of the hazardous waste.

R315-266-109. Hazardous Waste Burned in Boilers and Industrial Furnaces -- Low Risk Waste Exemption.

(a) Waiver of DRE standard. The DRE standard of Subsection R315-266-104(a) does not apply if the boiler or industrial furnace is operated in conformance with Subsection R315-266-109(a)(1) and the owner or operator demonstrates by procedures prescribed in Subsection R315-266-109(a)(2) that the burning will not result in unacceptable adverse health effects.

(1) The device shall be operated as follows:

(i) A minimum of 50 percent of fuel fired to the device shall be fossil fuel, fuels derived from fossil fuel, tall oil, or, if approved by the Director on a case-by-case basis, other nonhazardous fuel with combustion characteristics comparable to fossil fuel. Such fuels are termed "primary fuel" for purposes of Section R315-266-109. Tall oil is a fuel derived from vegetable and rosin fatty acids. The 50 percent primary fuel firing rate shall be determined on a total heat or mass input basis, whichever results in the greater mass feed rate of primary fuel fired;

(ii) Primary fuels and hazardous waste fuels shall have a minimum as-fired heating value of 8,000 Btu/lb;

(iii) The hazardous waste is fired directly into the primary fuel flame zone of the combustion chamber; and

(iv) The device operates in conformance with the carbon monoxide controls provided by Subsection R315-266-104(b)(1). Devices subject to the exemption provided by Section R315-266-109 are not eligible for the alternative carbon monoxide controls provided by Subsection R315-266-104(c).

(2) Procedures to demonstrate that the hazardous waste burning will not pose unacceptable adverse public health effects are as follows:

(i) Identify and quantify those nonmetal compounds listed in appendix VIII, Rule R315-261 that could reasonably be expected to be present in the hazardous waste. The constituents excluded from analysis shall be identified and the basis for their exclusion explained;

(ii) Calculate reasonable, worst case emission rates for each constituent identified in Subsection R315-266-109(a)(2)(i) by assuming the device achieves 99.9 percent destruction and removal efficiency. That is, assume that 0.1 percent of the mass weight of each constituent fed to the device is emitted.

(iii) For each constituent identified in Subsection R315-266-109(a)(2)(i), use emissions dispersion modeling to predict the maximum annual average ground level concentration of the constituent.

(A) Dispersion modeling shall be conducted using methods specified in Subsection R315-266-106(h).

(B) Owners and operators of facilities with more than one on-site stack from a boiler or industrial furnace that is exempt under Section R315-266-109 shall conduct dispersion modeling of emissions from all stacks exempt under Section R315-266-109 to predict ambient levels prescribed by Subsection R315-266-109(a).

(iv) Ground level concentrations of constituents predicted under Subsection R315-266-109(a)(2)(iii) shall not exceed the following levels:

(A) For the noncarcinogenic compounds listed in appendix IV of Rule R315-266, the levels established in appendix IV;

(B) For the carcinogenic compounds listed in appendix V of Rule R315-266, the sum for all constituents of the ratios of the actual ground level concentration to the level established in appendix V cannot exceed 1.0; and

(C) For constituents not listed in appendix IV or V, 0.1 micrograms per cubic meter.

(b) Waiver of particulate matter standard. The particulate matter standard of Section R315-266-105 does not apply if:

(1) The DRE standard is waived under Subsection R315-266-109(a); and

(2) The owner or operator complies with the Tier I or adjusted Tier I metals feed rate screening limits provided by Subsections R315-266-106(b) or (e).

R315-266-110. Hazardous Waste Burned in Boilers and Industrial Furnaces -- Waiver of DRE Trial Burn for Boilers.

Boilers that operate under the special requirements of Section R315-266-110, and that do not burn hazardous waste containing, or waste derived from, EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, or F027, are considered to be in conformance with the DRE standard of Subsection R315-266-104(a), and a trial burn to demonstrate DRE is waived. When burning hazardous waste:

(a) A minimum of 50 percent of fuel fired to the device shall be fossil fuel, fuels derived from fossil fuel, tall oil, or, if approved by the Director on a case-by-case basis, other nonhazardous fuel with combustion characteristics comparable to fossil fuel. Such fuels are termed "primary fuel" for purposes of Section R315-266-110. Tall oil is a fuel derived from vegetable and rosin fatty acids. The 50 percent primary fuel firing rate shall be determined on a total heat or mass input basis, whichever results in the greater mass feed rate of primary fuel fired;

(b) Boiler load shall not be less than 40 percent. Boiler load is the ratio at any time of the total heat input to the maximum design heat input;

(c) Primary fuels and hazardous waste fuels shall have a minimum as-fired heating value of 8,000 Btu/lb, and each material fired in a burner where hazardous waste is fired shall have a heating value of at least 8,000 Btu/lb, as-fired;

(d) The device shall operate in conformance with the carbon monoxide standard provided by Subsection R315-266-104(b)(1). Boilers subject to the waiver of the DRE trial burn provided by Section R315-266-110 are not eligible for the alternative carbon monoxide standard provided by Subsection R315-266-104(c);

(e) The boiler shall be a watertube type boiler that does not feed fuel using a stoker or stoker type mechanism; and

(f) The hazardous waste shall be fired directly into the primary fuel flame zone of the combustion chamber with an air or steam atomization firing system, mechanical atomization system, or a rotary cup atomization system under the following conditions:

(1) Viscosity. The viscosity of the hazardous waste fuel as-fired shall not exceed 300 SSU;

(2) Particle size. When a high pressure air or steam atomizer, low pressure atomizer, or mechanical atomizer is used, 70% of the hazardous waste fuel shall pass through a 200 mesh, 74 micron, screen, and when a rotary cup atomizer is used, 70% of the hazardous waste shall pass through a 100 mesh, 150 micron, screen;

(3) Mechanical atomization systems. Fuel pressure within a mechanical atomization system and fuel flow rate shall be maintained within the design range taking into account the viscosity and volatility of the fuel;

(4) Rotary cup atomization systems. Fuel flow rate through a rotary cup atomization system shall be maintained within the design range taking into account the viscosity and volatility of the fuel.

R315-266-111. Hazardous Waste Burned in Boilers and Industrial Furnaces -- Standards for Direct Transfer.

(a) Applicability. The regulations in Section R315-266-111 apply to owners and operators of boilers and industrial furnaces subject to Sections R315-266-102 or 103 if hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit.

(b) Definitions.

(1) When used in Section R315-266-111, the following terms have the meanings given below:

Direct transfer equipment means any device, including but not limited to, such devices as piping, fittings, flanges, valves, and pumps, that is used to distribute, meter, or control the flow of hazardous waste between a container, i.e., transport vehicle, and a boiler or industrial furnace.

Container means any portable device in which hazardous waste is transported, stored, treated, or otherwise handled, and includes transport vehicles that are containers themselves, e.g., tank trucks, tanker-trailers, and rail tank cars, and containers placed on or in a transport vehicle.

(2) Section R315-266-111 references several requirements provided in Sections R315-264-170 through 200 and 40 CFR 265.170 through 202, which are adopted by reference. For purposes of Section R315-266-111, the term "tank systems" in those referenced requirements means direct transfer equipment as defined in Subsection R315-266-111(b)(1).

(c) General operating requirements.

(1) No direct transfer of a pumpable hazardous waste shall be conducted from an open-top container to a boiler or industrial furnace.

(2) Direct transfer equipment used for pumpable hazardous waste shall always be closed, except when necessary to add or remove the waste, and shall not be opened, handled, or stored in a manner that may cause any rupture or leak.

(3) The direct transfer of hazardous waste to a boiler or industrial furnace shall be conducted so that it does not:

- (i) Generate extreme heat or pressure, fire, explosion, or violent reaction;
- (ii) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health;
- (iii) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
- (iv) Damage the structural integrity of the container or direct transfer equipment containing the waste;
- (v) Adversely affect the capability of the boiler or industrial furnace to meet the standards provided by Sections R315-266-104 through 107; or
- (vi) Threaten human health or the environment.

(4) Hazardous waste shall not be placed in direct transfer equipment, if it could cause the equipment or its secondary containment system to rupture, leak, corrode, or otherwise fail.

(5) The owner or operator of the facility shall use appropriate controls and practices to prevent spills and overflows from the direct transfer equipment or its secondary containment systems. These include at a minimum:

- (i) Spill prevention controls, e.g., check valves, dry discount couplings; and
- (ii) Automatic waste feed cutoff to use if a leak or spill occurs from the direct transfer equipment.

(d) Areas where direct transfer vehicles, containers, are located. Applying the definition of container under Section R315-266-111, owners and operators shall comply with the following requirements:

(1) The containment requirements of Section R315-264-175;

(2) The use and management requirements of 40 CFR 265.171 through 178, which are adopted by reference, except for 265-174, and except that in lieu of the special requirements of 265-176 for ignitable or reactive waste, the owner or operator may comply with the requirements for the maintenance of protective distances between the waste management area and

any public ways, streets, alleys, or an adjacent property line that can be built upon as required in Tables 2-1 through 2-6 of the National Fire Protection Association's (NFPA) "Flammable and Combustible Liquids Code," (1977 or 1981), incorporated by reference, see Section R315-260-11. The owner or operator shall obtain and keep on file at the facility a written certification by the local Fire Marshall that the installation meets the subject NFPA codes; and

(3) The closure requirements of Section R315-264-178.

(e) Direct transfer equipment. Direct transfer equipment shall meet the following requirements:

(1) Secondary containment. Owners and operators shall comply with the secondary containment requirements of 40 CFR 265.193, which are adopted by reference, except for 265-193(a), (d), (e), and (i) as follows:

(i) For all new direct transfer equipment, prior to their being put into service; and

(ii) For existing direct transfer equipment within 2 years after August 21, 1991.

(2) Requirements prior to meeting secondary containment requirements.

(i) For existing direct transfer equipment that does not have secondary containment, the owner or operator shall determine whether the equipment is leaking or is unfit for use. The owner or operator shall obtain and keep on file at the facility a written assessment reviewed and certified by a qualified, registered professional engineer in accordance with Subsection R315-270-11(d) that attests to the equipment's integrity by August 21, 1992.

(ii) This assessment shall determine whether the direct transfer equipment is adequately designed and has sufficient structural strength and compatibility with the waste(s) to be transferred to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment shall consider the following:

(A) Design standard(s), if available, according to which the direct transfer equipment was constructed;

(B) Hazardous characteristics of the waste(s) that have been or will be handled;

(C) Existing corrosion protection measures;

(D) Documented age of the equipment, if available, otherwise, an estimate of the age; and

(E) Results of a leak test or other integrity examination such that the effects of temperature variations, vapor pockets, cracks, leaks, corrosion, and erosion are accounted for.

(iii) If, as a result of the assessment specified above, the direct transfer equipment is found to be leaking or unfit for use, the owner or operator shall comply with the requirements of 40 CFR 265.196(a) and (b), which are adopted by reference.

(3) Inspections and recordkeeping.

(i) The owner or operator shall inspect at least once each operating hour when hazardous waste is being transferred from the transport vehicle, container, to the boiler or industrial furnace:

(A) Overfill/spill control equipment, e.g., waste-feed cutoff systems, bypass systems, and drainage systems, to ensure that it is in good working order;

(B) The above ground portions of the direct transfer equipment to detect corrosion, erosion, or releases of waste, e.g., wet spots, dead vegetation; and

(C) Data gathered from monitoring equipment and leak-detection equipment, e.g., pressure and temperature gauges, to ensure that the direct transfer equipment is being operated according to its design.

(ii) The owner or operator shall inspect cathodic protection systems, if used, to ensure that they are functioning properly according to the schedule provided by 40 CFR 265.195(b), which is adopted by reference:

(iii) Records of inspections made under Subsection R315-266-11(e)(3) shall be maintained in the operating record at the

facility, and available for inspection for at least 3 years from the date of the inspection.

(4) Design and installation of new ancillary equipment. Owners and operators shall comply with the requirements of 40 CFR 265.192, which is adopted by reference.

(5) Response to leaks or spills. Owners and operators shall comply with the requirements of 40 CFR 265.196, which is adopted by reference.

(6) Closure. Owners and operators shall comply with the requirements of 40 CFR 265.197, which are adopted by reference, except for 265-197(c)(2) through (c)(4).

R315-266-112. Hazardous Waste Burned in Boilers and Industrial Furnaces -- Regulation of Residues.

A residue derived from the burning or processing of hazardous waste in a boiler or industrial furnace is not excluded from the definition of a hazardous waste under Subsections R315-261-4(b)(4), (7), or (8) unless the device and the owner or operator meet the following requirements:

(a) The device meets the following criteria:

(1) Boilers. Boilers shall burn at least 50% coal on a total heat input or mass input basis, whichever results in the greater mass feed rate of coal;

(2) Ore or mineral furnaces. Industrial furnaces subject to Subsection R315-261-4(b)(7) shall process at least 50% by weight normal, nonhazardous raw materials;

(3) Cement kilns. Cement kilns shall process at least 50% by weight normal cement-production raw materials;

(b) The owner or operator demonstrates that the hazardous waste does not significantly affect the residue by demonstrating conformance with either of the following criteria:

(1) Comparison of waste-derived residue with normal residue. The waste-derived residue shall not contain appendix VIII, Rule R315-261 constituents, toxic constituents, that could reasonably be attributable to the hazardous waste at concentrations significantly higher than in residue generated without burning or processing of hazardous waste, using the following procedure. Toxic compounds that could reasonably be attributable to burning or processing the hazardous waste, constituents of concern, include toxic constituents in the hazardous waste, and the organic compounds listed in appendix VIII of Rule R315-266 that may be generated as products of incomplete combustion. For polychlorinated dibenzo-p-dioxins and polychlorinated dibenzo-furans, analyses shall be performed to determine specific congeners and homologues, and the results converted to 2,3,7,8-TCDD equivalent values using the procedure specified in section 4.0 of appendix IX of Rule R315-266.

(i) Normal residue. Concentrations of toxic constituents of concern in normal residue shall be determined based on analyses of a minimum of 10 samples representing a minimum of 10 days of operation. Composite samples may be used to develop a sample for analysis provided that the compositing period does not exceed 24 hours. The upper tolerance limit, at 95% confidence with a 95% proportion of the sample distribution, of the concentration in the normal residue shall be considered the statistically-derived concentration in the normal residue. If changes in raw materials or fuels reduce the statistically-derived concentrations of the toxic constituents of concern in the normal residue, the statistically-derived concentrations shall be revised or statistically-derived concentrations of toxic constituents in normal residue shall be established for a new mode of operation with the new raw material or fuel. To determine the upper tolerance limit in the normal residue, the owner or operator shall use statistical procedures prescribed in "Statistical Methodology for Beville Residue Determinations" in appendix IX of Rule R315-266.

(ii) Waste-derived residue. Waste-derived residue shall be sampled and analyzed as often as necessary to determine

whether the residue generated during each 24-hour period has concentrations of toxic constituents that are higher than the concentrations established for the normal residue under Subsection R315-266-112(b)(1)(i). If so, hazardous waste burning has significantly affected the residue and the residue shall not be excluded from the definition of a hazardous waste. Concentrations of toxic constituents of concern in the waste-derived residue shall be determined based on analysis of one or more samples obtained over a 24-hour period. Multiple samples may be analyzed, and multiple samples may be taken to form a composite sample for analysis provided that the sampling period does not exceed 24 hours. If more than one sample is analyzed to characterize waste-derived residues generated over a 24-hour period, the concentration of each toxic constituent shall be the arithmetic mean of the concentrations in the samples. No results may be disregarded; or

(2) Comparison of waste-derived residue concentrations with health-based limits

(i) Nonmetal constituents: The concentration of each nonmetal toxic constituent of concern, specified in Subsection R315-266-112(b)(1), in the waste-derived residue shall not exceed the health-based level specified in appendix VII of Rule R315-266, or the level of detection, whichever is higher. If a health-based limit for a constituent of concern is not listed in appendix VII of Rule R315-266, then a limit of 0.002 micrograms per kilogram or the level of detection, which shall be determined by using appropriate analytical procedures, whichever is higher, shall be used. The levels specified in appendix VII of Rule R315-266, and the default level of 0.002 micrograms per kilogram or the level of detection for constituents as identified in Note 1 of appendix VII of Rule R315-266, are administratively stayed under the condition, for those constituents specified in Subsection R315-266-112(b)(1), that the owner or operator complies with alternative levels defined as the land disposal restriction limits specified in Section R315-268-43 for F039 nonwastewaters. In complying with those alternative levels, if an owner or operator is unable to detect a constituent despite documenting use of best good-faith efforts as defined by applicable guidance or standards, the owner or operator is deemed to be in compliance for that constituent. Until new guidance or standards are developed, the owner or operator may demonstrate such good-faith efforts by achieving a detection limit for the constituent that does not exceed an order of magnitude above the level provided by Section R315-268-43 for F039 nonwastewaters. In complying with the Section R315-268-43 F039 nonwastewater levels for polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans, analyses shall be performed for total hexachlorodibenzo-p-dioxins, total hexachlorodibenzofurans, total pentachlorodibenzo-p-dioxins, total pentachlorodibenzofurans, total tetrachlorodibenzo-p-dioxins, and total tetrachlorodibenzofurans.

Note to Subsection R315-266-112(b)(2)(i): The administrative stay, under the condition that the owner or operator complies with alternative levels defined as the land disposal restriction limits specified in Section R315-268-43 for F039 nonwastewaters, remains in effect until further administrative action is taken and notice is published.

(ii) Metal constituents. The concentration of metals in an extract obtained using the Toxicity Characteristic Leaching Procedure of Section R315-261-24 shall not exceed the levels specified in appendix VII of Rule R315-266; and

(iii) Sampling and analysis. Waste-derived residue shall be sampled and analyzed as often as necessary to determine whether the residue generated during each 24-hour period has concentrations of toxic constituents that are higher than the health-based levels. Concentrations of toxic constituents of concern in the waste-derived residue shall be determined based on analysis of one or more samples obtained over a 24-hour

period. Multiple samples may be analyzed, and multiple samples may be taken to form a composite sample for analysis provided that the sampling period does not exceed 24 hours. If more than one sample is analyzed to characterize waste-derived residues generated over a 24-hour period, the concentration of each toxic constituent shall be the arithmetic mean of the concentrations in the samples. No results may be disregarded; and

(c) Records sufficient to document compliance with the provisions of Section R315-266-112 shall be retained until closure of the boiler or industrial furnace unit. At a minimum, the following shall be recorded.

(1) Levels of constituents in appendix VIII, Rule R315-261, that are present in waste-derived residues;

(2) If the waste-derived residue is compared with normal residue under Subsection R315-266-112(b)(1):

(i) The levels of constituents in appendix VIII, Rule R315-261, that are present in normal residues; and

(ii) Data and information, including analyses of samples as necessary, obtained to determine if changes in raw materials or fuels would reduce the concentration of toxic constituents of concern in the normal residue.

R315-266-202. Military Munitions -- Definition of Solid Waste.

(a) Reserved.

(b) Reserved.

(c) Reserved.

(d) For purposes of Subsection 19-6-102(19)(a), a used or fired military munition is a solid waste, and, therefore, is potentially subject to RCRA corrective action authorities under sections 3004(u) and (v), and 3008(h), or imminent and substantial endangerment authorities under section 7003, if the munition lands off-range and is not promptly rendered safe and/or retrieved. Any imminent and substantial threats associated with any remaining material shall be addressed. If remedial action is infeasible, the operator of the range shall maintain a record of the event for as long as any threat remains. The record shall include the type of munition and its location, to the extent the location is known.

R315-266-203. Appendix I to Rule R315-266 -- Tier I and Tier II Feed Rate and Emissions Screening Limits for Metals.

Appendix I of 40 CFR 266, 2015 edition, is adopted and incorporated by reference.

R315-266-204. Appendix II to Rule R315-266 -- Tier I Feed Rate Screening Limits for Total Chlorine.

Terrain-adjusted effective stack height (m)	Noncomplex Terrain		Complex Terrain (g/hr)
	Urban (g/hr)	Rural (g/hr)	
4	8.2E+01	4.2E+01	1.9E+01
6	9.1E+01	4.8E+01	2.8E+01
8	1.0E+02	5.3E+01	4.1E+01
10	1.2E+02	6.2E+01	5.8E+01
12	1.3E+02	7.7E+01	7.2E+01
14	1.5E+02	9.1E+01	9.1E+01
16	1.7E+02	1.2E+02	1.1E+02
18	1.9E+02	1.4E+02	1.2E+02
20	2.1E+02	1.8E+02	1.3E+02
22	2.4E+02	2.3E+02	1.4E+02
24	2.7E+02	2.9E+02	1.6E+02
26	3.1E+02	3.7E+02	1.7E+02
28	3.5E+02	4.7E+02	1.9E+02
30	3.9E+02	5.8E+02	2.1E+02
35	5.3E+02	9.6E+02	2.6E+02
40	6.2E+02	1.4E+03	3.3E+02
45	8.2E+02	2.0E+03	4.0E+02
50	1.1E+03	2.6E+03	4.8E+02
55	1.3E+03	3.5E+03	6.2E+02

60	1.6E+03	4.6E+03	7.7E+02
65	2.0E+03	6.2E+03	9.1E+02
70	2.3E+03	7.2E+03	1.1E+03
75	2.5E+03	8.6E+03	1.2E+03
80	2.9E+03	1.0E+04	1.3E+03
85	3.3E+03	1.2E+04	1.4E+03
90	3.7E+03	1.4E+04	1.6E+03
95	4.2E+03	1.7E+04	1.8E+03
100	4.8E+03	2.1E+04	2.0E+03
105	5.3E+03	2.4E+04	2.3E+03
110	6.2E+03	2.9E+04	2.5E+03
115	7.2E+03	3.5E+04	2.8E+03
120	8.2E+03	4.1E+04	3.2E+03

R315-266-205. Appendix III to Rule R315-266 -- Tier II Emission Rate Screening Limits for Free Chlorine and Hydrogen Chloride.

Appendix III of 40 CFR 266, 2015 edition, is adopted and incorporated by reference.

R315-266-206. Appendix IV to Rule R315-266 -- Reference Air Concentrations*.

Constituent	CAS No.	RAC (ug/m ³)
Acetaldehyde	75-07-0	10
Acetonitrile	75-05-8	10
Acetophenone	98-86-2	100
Acrolein	107-02-8	20
Aldicarb	116-06-3	1
Aluminum Phosphide	20859-73-8	0.3
Allyl Alcohol	107-18-6	5
Antimony	7440-36-0	0.3
Barium	7440-39-3	50
Barium Cyanide	542-62-1	50
Bromomethane	74-83-9	0.8
Calcium Cyanide	592-01-8	30
Carbon Disulfide	75-15-0	200
Chloral	75-87-6	2
Chlorine (free)		0.4
2-Chloro-1,3-butadiene	126-99-8	3
Chromium III	16065-83-1	1000
Copper Cyanide	544-92-3	5
Cresols	1319-77-3	50
Cumene	98-82-8	1
Cyanide (free)	57-12-15	20
Cyanogen	460-19-5	30
Cyanogen Bromide	506-68-3	80
Di-n-butyl Phthalate	84-74-2	100
o-Dichlorobenzene	95-50-1	10
p-Dichlorobenzene	106-46-7	10
Dichlorodifluoromethane	75-71-8	200
2,4-Dichlorophenol	120-83-2	3
Diethyl Phthalate	84-66-2	800
Dimethoate	60-51-5	0.8
2,4-Dinitrophenol	51-28-5	2
Dinoseb	88-85-7	0.9
Diphenylamine	122-39-4	20
Endosulfan	115-29-1	0.05
Endrin	72-20-8	0.3
Fluorine	7782-41-4	50
Formic Acid	64-18-6	2000
Glycidyaldehyde	765-34-4	0.3
Hexachlorocyclopentadiene	77-47-4	5
Hexachlorophene	70-30-4	0.3
Hydrocyanic Acid	74-90-8	20
Hydrogen Chloride	7647-01-1	7
Hydrogen Sulfide	7783-06-4	3
Isobutyl Alcohol	78-83-1	300
Lead	7439-92-1	0.09
Maleic Anhydride	108-31-6	100
Mercury	7439-97-6	0.3
Methacrylonitrile	126-98-7	0.1
Methomyl	16752-77-5	20
Methoxychlor	72-43-5	50
Methyl Chlorocarbonate	79-22-1	1000
Methyl Ethyl Ketone	78-93-3	80
Methyl Parathion	298-00-0	0.3
Nickel Cyanide	557-19-7	20
Nitric Oxide	10102-43-9	100
Nitrobenzene	98-95-3	0.8
Pentachlorobenzene	608-93-5	0.8
Pentachlorophenol	87-86-5	30
Phenol	108-95-2	30
M-Phenylenediamine	108-45-2	5
Phenylmercuric Acetate	62-38-4	0.075

Phosphine	7803-51-2	0.3
Phthalic Anhydride	85-44-9	2000
Potassium Cyanide	151-50-8	50
Potassium Silver Cyanide	506-61-6	200
Pyridine	110-86-1	1
Selenious Acid	7783-60-8	3
Selenourea	630-10-4	5
Silver	7440-22-4	3
Silver Cyanide	506-64-9	100
Sodium Cyanide	143-33-9	30
Strychnine	57-24-9	0.3
1,2,4,5-Tetrachlorobenzene	95-94-3	0.3
2,3,4,6-Tetrachlorophenol	58-90-2	30
Tetraethyl Lead	78-00-2	0.0001
Tetrahydrofuran	109-99-9	10
Thallic Oxide	1314-32-5	0.3
Thallium	7440-28-0	0.5
Thallium (I) Acetate	563-68-8	0.5
Thallium (I) Carbonate	6533-73-9	0.3
Thallium (I) Chloride	7791-12-0	0.3
Thallium (I) Nitrate	10102-45-1	0.5
Thallium Selenite	12039-52-0	0.5
Thallium (I) Sulfate	7446-18-6	0.075
Thiram	137-26-8	5
Toluene	108-88-3	300
1,2,4-Trichlorobenzene	120-82-1	20
Trichloromonofluoromethane	75-69-4	300
2,4,5-Trichlorophenol	95-95-4	100
Vanadium Pentoxide	1314-62-1	20
Warfarin	81-81-2	0.3
Xylenes	1330-20-7	80
Zinc Cyanide	557-21-1	50
Zinc Phosphide	1314-84-7	0.3

Hexachlorobutadiene	87-68-3	2.0E-05	5.0E-01
Alpha-hexachloro-cyclohexane	319-84-6	1.8E-03	5.6E-03
Beta-hexachloro-cyclohexane	319-85-7	5.3E-04	1.9E-02
Gamma-hexachloro-cyclohexane	58-89-9	3.8E-04	2.6E-02
Hexachlorocyclohexane, Technical		5.1E-04	2.0E-02
Hexachlorodibenzo-p-dioxin (1,2 Mixture)		1.3E+0	7.7E-06
Hexachloroethane	67-72-1	4.0E-06	2.5E+00
Hydrazine	302-01-2	2.9E-03	3.4E-03
Hydrazine Sulfate	302-01-2	2.9E-03	3.4E-03
3-Methylcholanthrene	56-49-5	2.7E-03	3.7E-03
Methyl Hydrazine	60-34-4	3.1E-04	3.2E-02
Methylene Chloride	75-09-2	4.1E-06	2.4E+00
4,4'-Methylene-bis-2-chloroaniline	101-14-4	4.7E-05	2.1E-01
Nickel	7440-02-0	2.4E-04	4.2E-02
Nickel Refinery Dust	7440-02-0	2.4E-04	4.2E-02
Nickel Subsulfide	12035-72-2	4.8E-04	2.1E-02
2-Nitropropane	79-46-9	2.7E-02	3.7E-04
N-Nitroso-n-butylamine	924-16-3	1.6E-03	6.3E-03
N-Nitroso-n-methylurea	684-93-5	8.6E-02	1.2E-04
N-Nitrosodiethylamine	55-18-5	4.3E-02	2.3E-04
N-Nitrosopyrrolidine	930-55-2	6.1E-04	1.6E-02
Pentachloronitrobenzene	82-68-8	7.3E-05	1.4E-01
PCBs	1336-36-3	1.2E-03	8.3E-03
Pronamide	23950-58-5	4.6E-06	2.2E+00
Reserpine	50-55-5	3.0E-03	3.3E-03
2,3,7,8-Tetrachloro-dibenzo-p-dioxin	1746-01-6	4.5E+01	2.2E-07
1,1,2,2-Tetrachloroethane	79-34-5	5.8E-05	1.7E-01
Tetrachloroethylene	127-18-4	4.8E-07	2.1E+01
Thiourea	62-56-6	5.5E-04	1.8E-02
1,1,2-Trichloroethane	79-00-5	1.6E-05	6.3E-01
Trichloroethylene	79-01-6	1.3E-06	7.7E+00
2,4,6-Trichlorophenol	88-06-2	5.7E-06	1.8E+00
Toxaphene	8001-35-2	3.2E-04	3.1E-02
Vinyl Chloride	75-01-4	7.1E-06	1.4E+00

*The RAC for other appendix VIII Rule R315-261 constituents not listed herein or in appendix V of Rule R315-266 is 0.1 ug/m³.

R315-266-207. Appendix V to Rule R315-266 -- Risk Specific Doses.

Table

Constituent	CAS No.	Unit risk (m3/microg)	RsD (microg/m3)
Acrylamide	79-06-1	1.3E-03	7.7E-03
Acrylonitrile	107-13-1	6.8E-05	1.5E-01
Aldrin	309-00-2	4.9E-03	2.0E-03
Aniline	62-53-3	7.4E-06	1.4E+00
Arsenic	7440-38-2	4.3E-03	2.3E-03
Benz(a)anthracene	56-55-3	8.9E-04	1.1E-02
Benzene	71-43-2	8.3E-06	1.2E+00
Benzidine	92-87-5	6.7E-02	1.5E-04
Benzo(a)pyrene	50-32-8	3.3E-03	3.0E-03
Beryllium	7440-41-7	2.4E-03	4.2E-03
Bis(2-chloroethyl) ether	111-44-4	3.3E-04	3.0E-02
Bis(chloromethyl)ether	542-88-1	6.2E-02	1.6E-04
Bis(2-ethylhexyl)-phthalate	117-81-7	2.4E-07	4.2E+01
1,3-Butadiene	106-99-0	2.8E-04	3.6E-02
Cadmium	7440-43-9	1.8E-03	5.6E-03
Carbon Tetrachloride	56-23-5	1.5E-05	6.7E-01
Chlordane	57-74-9	3.7E-04	2.7E-02
Chloroform	67-66-3	2.3E-05	4.3E-01
Chloromethane	74-87-3	3.6E-06	2.8E+00
Chromium VI	7440-47-3	1.2E-02	8.3E-04
DDT	50-29-3	9.7E-05	1.0E-01
Dibenz(a,h)anthracene	53-70-3	1.4E-02	7.1E-04
1,2-Dibromo-3-chloropropane	96-12-8	6.3E-03	1.6E-03
1,2-Dibromoethane	106-93-4	2.2E-04	4.5E-02
1,1-Dichloroethane	75-34-3	2.6E-05	3.8E-01
1,2-Dichloroethane	107-06-2	2.6E-05	3.8E-01
1,1-Dichloroethylene	75-35-4	5.0E-05	2.0E-01
1,3-Dichloropropene	542-75-6	3.5E-01	2.9E-05
Diieldrin	60-57-1	4.6E-03	2.2E-03
Diethylstilbestrol	56-53-1	1.4E-01	7.1E-05
Dimethylnitrosamine	62-75-9	1.4E-02	7.1E-04
2,4-Dinitrotoluene	121-14-2	8.8E-05	1.1E-01
1,2-Diphenylhydrazine	122-66-7	2.2E-04	4.5E-02
1,4-Dioxane	123-91-1	1.4E-06	7.1E+00
Epichlorohydrin	106-89-8	1.2E-06	8.3E+00
Ethylene Oxide	75-21-8	1.0E-04	1.0E-01
Ethylene Dibromide	106-93-4	2.2E-04	4.5E-02
Formaldehyde	50-00-0	1.3E-05	7.7E-01
Heptachlor	76-44-8	1.3E-03	7.7E-03
Heptachlor Epoxide	1024-57-3	2.6E-03	3.8E-03
Hexachlorobenzene	118-74-1	4.9E-04	2.0E-02

R315-266-208. Appendix VI to Rule R315-266 -- Stack Plume Rise.

Appendix VI of 40 CFR 266, 2015 edition, is adopted and incorporated by reference.

R315-266-209. Appendix VII to Rule R315-266 -- Health-Based Limits for Exclusion of Waste-Derived Residues.

Table

Metals -- TCLP Extract Concentration Limits.

Constituent	CAS No.	Concentration limits (mg/L)
Antimony	7440-36-0	1xE+00
Arsenic	7440-38-2	5xE+00
Barium	7440-39-3	1xE+02
Beryllium	7440-41-7	7xE-03
Cadmium	7440-43-9	1xE+00
Chromium	7440-47-3	5xE+00
Lead	7439-92-1	5xE+00
Mercury	7439-97-6	2xE-01
Nickel	7440-02-0	7xE+01
Selenium	7782-49-2	1xE+00
Silver	7440-22-4	5xE+00
Thallium	7440-28-0	7xE+00

Nonmetals -- Residue Concentration Limits

Constituent	CAS No.	Concentration limits for residues (mg/kg)
Acetonitrile	75-05-8	2xE-01
Acetophenone	98-86-2	4xE+00
Acrolein	107-02-8	5xE-01
Acrylamide	79-06-1	2xE-04
Acrylonitrile	107-13-1	7xE-04
Aldrin	309-00-2	2xE-05
Allyl alcohol	107-18-6	2xE-01
Aluminum phosphide	20859-73-8	1xE-02
Aniline	62-53-3	6xE-02
Barium cyanide	542-62-1	1xE+00

Benz(a)anthracene	56-55-3	1xE-04
Benzene	71-43-2	5xE-03
Benzidine	92-87-5	1xE-06
Bis(2-chloroethyl) ether	111-44-4	3xE-04
Bis(chloroethyl) ether	542-88-1	2xE-06
Bis(2-ethylhexyl) phthalate	117-81-7	3xE+01
Bromoform	75-25-2	7xE-01
Calcium cyanide	592-01-8	1xE-06
Carbon disulfide	75-15-0	4xE+00
Carbon tetrachloride	56-23-5	5xE-03
Chlordane	57-74-9	3xE-04
Chlorobenzene	108-90-7	1xE+00
Chloroform	67-66-3	6xE-02
Copper cyanide	544-92-3	2xE-01
Cresols	1319-77-3	2xE+00
(Cresylic acid)		
Cyanogen	460-19-5	1xE+00
DDT	50-29-3	1xE-03
Dibenz(a, h)-anthracene	53-70-3	7xE-06
1,2-Dibromo-3-chloropropane	96-12-8	2xE-05
p-Dichlorobenzene	106-46-7	7.5xE-02
Dichlorodifluoromethane	75-71-8	7xE+00
1,1-Dichloroethylene	75-35-4	5xE-03
2,4-Dichlorophenol	120-83-2	1xE-01
1,3-Dichloropropene	542-75-6	1xE-03
Dieldrin	60-57-1	2xE-05
Diethyl phthalate	84-66-2	3xE+01
Diethylstilbesterol	56-53-1	7xE-07
Dimethoate	60-51-5	3xE-02
2,4-Dinitrotoluene	121-14-2	5xE-04
Diphenylamine	122-39-4	9xE-01
1,2-Diphenylhydrazine	122-66-7	5xE-04
Endosulfan	115-29-7	2xE-03
Endrin	72-20-8	2xE-04
Epichlorohydrin	106-89-8	4xE-02
Ethylene dibromide	106-93-4	4xE-07
Ethylene oxide	75-21-8	3xE-04
Fluorine	7782-41-4	4xE+00
Formic acid	64-18-6	7xE+01
Heptachlor	76-44-8	8xE-05
Heptachlor epoxide	1024-57-3	4xE-05
Hexachlorobenzene	118-74-1	2xE-04
Hexachlorobutadiene	87-68-3	5xE-03
Hexachlorocyclopentadiene	77-47-4	2xE-01
Hexachlorodibenzo-p-dioxins	19408-74-3	6xE-08
Hexachloroethane	67-72-1	3xE-02
Hydrazine	302-01-1	1xE-04
Hydrogen cyanide	74-90-8	7xE-05
Hydrogen sulfide	7783-06-4	1xE-06
Isobutyl alcohol	78-83-1	1xE+01
Methomyl	16752-77-5	1xE+00
Methoxychlor	72-43-5	1xE-01
3-Methylcholanthrene	56-49-5	4xE-05
4,4'-Methylenebis(2-chloroaniline)	101-14-4	2xE-03
Methylene chloride	75-09-2	5xE-02
Methyl ethyl ketone (MEK)	78-93-3	2xE+00
Methyl hydrazine	60-34-4	3xE-04
Methyl parathion	298-00-0	2xE-02
Naphthalene	91-20-3	1xE+01
Nickel cyanide	557-19-7	7xE-01
Nitric oxide	10102-43-9	4xE+00
Nitrobenzene	98-95-3	2xE-02
N-Nitrosodi-n-butylamine	924-16-3	6xE-05
N-Nitrosodiethylamine	55-18-5	2xE-06
N-Nitroso-N-methylurea	684-93-5	1xE-07
N-Nitrosopyrrolidine	930-55-2	2xE-04
Pentachlorobenzene	608-93-5	3xE-02
Pentachloronitrobenzene (PCNB)	82-68-8	1xE-01
Pentachlorophenol	87-86-5	1xE+00
Phenol	108-95-2	1xE+00
Phenylmercury acetate	62-38-4	3xE-03
Phosphine	7803-51-2	1xE-02
Polychlorinated biphenyls, N.O.S	1336-36-3	5xE-05
Potassium cyanide	151-50-8	2xE+00
Potassium silver cyanide	506-61-6	7xE+00
Pronamide	23950-58-5	3xE+00
Pyridine	110-86-1	4xE-02
Reserpine	50-55-5	3xE-05
Selenourea	630-10-4	2xE-01
Silver cyanide	506-64-9	4xE+00
Sodium cyanide	143-33-9	1xE+00
Strychnine	57-24-9	1xE-02

1,2,4,5-Tetrachlorobenzene	95-94-3	1xE-02
1,1,2,2-tetrachloroethane	79-34-5	2xE-03
Tetrachloroethylene	127-18-4	7xE-01
2,3,4,6-Tetrachlorophenol	58-90-2	1xE-02
Tetraethyl lead	78-00-2	4xE-06
Thiourea	62-56-6	2xE-04
Toluene	108-88-3	1xE+01
Toxaphene	8001-35-2	5xE-03
1,1,2-Trichloroethane	79-00-5	6xE-03
Trichloroethylene	79-01-6	5xE-03
Trichloromonofluoromethane	75-69-4	1xE+01
2,4,5-Trichlorophenol	95-95-4	4xE+00
2,4,6-Trichlorophenol	88-06-2	4xE+00
Vanadium pentoxide	1314-62-1	7xE-01
Vinyl chloride	75-01-4	2xE-03

*Note 1: The health-based concentration limits for appendix VIII Rule R315-261 constituents for which a health-based concentration is not provided below is 2xE-06 mg/kg.

Note 2: The levels specified in this appendix and the default level of 0.002 micrograms per kilogram or the level of detection for constituents as identified in Note 1 of this appendix are administratively stayed under the condition, for those constituents specified in Susection R315-266-112(b)(1), that the owner or operator complies with alternative levels defined as the land disposal restriction limits specified in Section R315-268-43 for F039 nonwastewaters. See Subsection R315-266-112(b)(2)(i).

R315-266-210. Appendix VIII to Rule R315-266 -- Organic Compounds for Which Residues Shall Be Analyzed.

Table

Volatiles
Benzene
Toluene
Carbon tetrachloride
Chloroform
Methylene chloride
Trichloroethylene
Tetra chloroethylene
1,1,1-Trichloroethane
Chlorobenzene
cis-1,4-Dichloro-2-butene
Bromochloromethane
Bromodichloromethane
Bromoform
Bromomethane
Methylene bromide
Methyl ethyl ketone
Semivolatiles
Bis(2-ethylhexyl)phthalate
Naphthalene
Phenol
Diethyl phthalate
Butyl benzyl phthalate
2,4-Dimethylphenol
o-Dichlorobenzene
m-Dichlorobenzene
p-Dichlorobenzene
Hexachlorobenzene
2,4,6-Trichlorophenol
Fluoranthene
o-Nitrophenol
1,2,4-Trichlorobenzene
o-Chlorophenol
Pentachlorophenol
Pyrene
Dimethyl phthalate
Mononitrobenzene
2,6-Toluene diisocyanate
Polychlorinated dibenzo-p-dioxins(1)
Polychlorinated dibenzo-furans(1)

(1) Analyses for polychlorinated dibenzo-p-dioxins and polychlorinated dibenzo-furans are required only for residues collected from areas downstream of the combustion chamber, e.g., ductwork, boiler tubes, heat exchange surfaces, air pollution control devices, etc.

Note to Appendix VIII: Analysis is not required for those compounds that do not have an established F039 nonwastewater concentration limit.

R315-266-211. Appendix IX to Rule R315-266 -- Methods Manual for Compliance With the BIF Regulations.

Appendix IX of 40 CFR 266, 2015 edition, is adopted and incorporated by reference.

R315-266-212. Appendix XI to Rule R315-266 -- Lead-Bearing Materials That May Be Processed in Exempt Lead Smelters.

A. Exempt Lead-Bearing Materials When Generated or Originally Produced By Lead-Associated Industries(1)

Acid dump/fill solids
Sump mud
Materials from laboratory analyses
Acid filters
Baghouse bags
Clothing, e.g., coveralls, aprons, shoes, hats, gloves
Sweepings
Air filter bags and cartridges
Respiratory cartridge filters
Shop abrasives
Stacking boards
Waste shipping containers, e.g., cartons, bags, drums, cardboard
Paper hand towels
Wiping rags and sponges
Contaminated pallets
Water treatment sludges, filter cakes, residues, and solids
Emission control dusts, sludges, filter cakes, residues, and solids from lead-associated industries, e.g., K069 and D008 wastes
Spent grids, posts, and separators
Spent batteries
Lead oxide and lead oxide residues
Lead plates and groups
Spent battery cases, covers, and vents
Pasting belts
Water filter media
Cheesecloth from pasting rollers
Pasting additive bags
Asphalt paving materials

B. Exempt Lead-Bearing Materials When Generated or Originally Produced By Any Industry

Charging jumpers and clips
Platen abrasive
Fluff from lead wire and cable casings
Lead-based pigments and compounding pigment dust
(1) Lead-associated industries are lead smelters, lead-acid battery manufacturing, and lead chemical manufacturing, e.g., manufacturing of lead oxide or other lead compounds.

R315-266-213. Appendix XII to Rule R315-266 -- Nickel or Chromium-Bearing Materials That May Be Processed in Exempt Nickel-Chromium Recovery Furnaces.

A. Exempt Nickel or Chromium-Bearing Materials when Generated by Manufacturers or Users of Nickel, Chromium, or Iron

Baghouse bags
Raney nickel catalyst
Floor sweepings
Air filters
Electroplating bath filters
Wastewater filter media
Wood pallets
Disposable clothing (coveralls, aprons, hats, and gloves)
Laboratory samples and spent chemicals
Shipping containers and plastic liners from containers or

vehicles used to transport nickel or chromium-containing wastes

Respirator cartridge filters
Paper hand towels
B. Exempt Nickel or Chromium-Bearing Materials when Generated by Any Industry
Electroplating wastewater treatment sludges (F006)
Nickel and/or chromium-containing solutions
Nickel, chromium, and iron catalysts
Nickel-cadmium and nickel-iron batteries
Filter cake from wet scrubber system water treatment plants in the specialty steel industry(1)
Filter cake from nickel-chromium alloy pickling operations(1)
(1) If a hazardous waste under an authorized State program.

R315-266-214. Appendix XIII to Rule R315-266 -- Mercury Bearing Wastes That May Be Processed in Exempt Mercury Recovery Units.

These are exempt mercury-bearing materials with less than 500 ppm of Rule R315-261, appendix VIII organic constituents when generated by manufacturers or users of mercury or mercury products.

1. Activated carbon
2. Decomposer graphite
3. Wood
4. Paper
5. Protective clothing
6. Sweepings
7. Respiratory cartridge filters
8. Cleanup articles
9. Plastic bags and other contaminated containers
10. Laboratory and process control samples
11. K106 and other wastewater treatment plant sludge and filter cake
12. Mercury cell sump and tank sludge
13. Mercury cell process solids
14. Recoverable levels of mercury contained in soil

**KEY: hazardous waste
April 15, 2016**

**19-6-105
19-6-106**

R315. Environmental Quality, Waste Management and Radiation Control, Waste Management.

R315-268. Land Disposal Restrictions.

R315-268-1. Land Disposal Restrictions -- Purpose, Scope, and Applicability.

(a) Rule R315-268 identifies hazardous wastes that are restricted from land disposal and defines those limited circumstances under which an otherwise prohibited waste may continue to be land disposed.

(b) Except as specifically provided otherwise in Rule R315-268 or Rule R315-261, the requirements of Rule R315-268 apply to persons who generate or transport hazardous waste and owners and operators of hazardous waste treatment, storage, and disposal facilities.

(c) Restricted wastes may continue to be land disposed as follows:

(1) Where persons have been granted an extension to the effective date of a prohibition under Sections R315-268-20 through 39 or pursuant to Section R315-268-5, with respect to those wastes covered by the extension;

(2) Where persons have been granted an exemption from a prohibition pursuant to a petition under Section R315-268-6, with respect to those wastes and units covered by the petition;

(3) Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under Rule R315-268, or 40 CFR 148, are not prohibited if the wastes:

(i) Are disposed into a nonhazardous or hazardous injection well as defined under 40 CFR 146.6(a); and

(ii) Do not exhibit any prohibited characteristic of hazardous waste identified in Sections R315-261-20 through 24, at the point of injection.

(4) Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under Rule R315-268, are not prohibited if the wastes meet any of the following criteria, unless the wastes are subject to a specified method of treatment other than DEACT in Section R315-268-40, or are D003 reactive cyanide:

(i) The wastes are managed in a treatment system which subsequently discharges to waters of the U.S. pursuant to a permit issued under section 402 of the Clean Water Act; or

(ii) The wastes are treated for purposes of the pretreatment requirements of section 307 of the Clean Water Act; or

(iii) The wastes are managed in a zero discharge system engaged in Clean Water Act-equivalent treatment as defined in Subsection R315-268-37(a); and

(iv) The wastes no longer exhibit a prohibited characteristic at the point of land disposal, i.e., placement in a surface impoundment.

(d) The requirements of Rule R315-268 shall not affect the availability of a waiver under section 121(d)(4) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).

(e) The following hazardous wastes are not subject to any provision of Rule R315-268:

(1) Waste generated by small quantity generators of less than 100 kilograms of non-acute hazardous waste or less than 1 kilogram of acute hazardous waste per month, as defined in Section R315-261-5;

(2) Waste pesticides that a farmer disposes of pursuant to Section R315-262-70;

(3) Wastes identified or listed as hazardous after November 8, 1984 for which EPA has not promulgated land disposal prohibitions or treatment standards;

(4) De minimis losses of characteristic wastes to wastewaters are not considered to be prohibited wastes and are defined as losses from normal material handling operations, e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used

to transfer materials; minor leaks of process equipment, storage tanks or containers; leaks from well-maintained pump packings and seals; sample purgings; and relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; rinsate from empty containers or from containers that are rendered empty by that rinsing; and laboratory wastes not exceeding one per cent of the total flow of wastewater into the facility's headworks on an annual basis, or with a combined annualized average concentration not exceeding one part per million in the headworks of the facility's wastewater treatment or pretreatment facility.

(f) Universal waste handlers and universal waste transporters, as defined in Section R315-260-10, are exempt from Sections R315-268-7 and 268-50 for the hazardous wastes listed below. These handlers are subject to regulation under Rule R315-273.

(1) Batteries as described in Section R315-273-2;

(2) Pesticides as described in Section R315-273-3;

(3) Mercury-containing equipment as described in Section R315-273-4; and

(4) Lamps as described in Section R315-273-5.

R315-268-2. Land Disposal Restrictions -- Definitions Applicable in Rule R315-268.

When used in Rule R315-268 the following terms have the meanings given below:

(a) Halogenated organic compounds or HOCs means those compounds having a carbon-halogen bond which are listed under appendix III to Rule R315-268.

(b) Hazardous constituent or constituents means those constituents listed in appendix VIII to Rule R315-261.

(c) Land disposal means placement in or on the land, except in a corrective action management unit or staging pile, and includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, underground mine or cave, or placement in a concrete vault, or bunker intended for disposal purposes.

(d) Nonwastewaters are wastes that do not meet the criteria for wastewaters in Subsection R315-268-2(f).

(e) Polychlorinated biphenyls or PCBs are halogenated organic compounds defined in accordance with 40 CFR 761.3.

(f) Wastewaters are wastes that contain less than 1% by weight total organic carbon (TOC) and less than 1% by weight total suspended solids (TSS).

(g) Debris means solid material exceeding a 60 mm particle size that is intended for disposal and that is: A manufactured object; or plant or animal matter; or natural geologic material. However, the following materials are not debris: any material for which a specific treatment standard is provided in Sections R315-268-40 through 49, namely lead acid batteries, cadmium batteries, and radioactive lead solids; process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and intact containers of hazardous waste that are not ruptured and that retain at least 75% of their original volume. A mixture of debris that has not been treated to the standards provided by Section R315-268-45 and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

(h) Hazardous debris means debris that contains a hazardous waste listed in Sections R315-261-30 through 35, or that exhibits a characteristic of hazardous waste identified in Sections R315-261-20 through 24. Any deliberate mixing of prohibited hazardous waste with debris that changes its treatment classification, i.e., from waste to hazardous debris, is not allowed under the dilution prohibition in Section R315-268-3.

(i) Underlying hazardous constituent means any

constituent listed in Section R315-268-48, Table UTS-Universal Treatment Standards, except fluoride, selenium, sulfides, vanadium, and zinc, which can reasonably be expected to be present at the point of generation of the hazardous waste at a concentration above the constituent-specific UTS treatment standards.

(j) Inorganic metal-bearing waste is one for which EPA has established treatment standards for metal hazardous constituents, and which does not otherwise contain significant organic or cyanide content as described in Subsection R315-268-3(c)(1), and is specifically listed in appendix XI of Rule R315-268.

(k) Soil means unconsolidated earth material composing the superficial geologic strata, material overlying bedrock, consisting of clay, silt, sand, or gravel size particles as classified by the U.S. Natural Resources Conservation Service, or a mixture of such materials with liquids, sludges or solids which is inseparable by simple mechanical removal processes and is made up primarily of soil by volume based on visual inspection. Any deliberate mixing of prohibited hazardous waste with soil that changes its treatment classification, i.e., from waste to contaminated soil, is not allowed under the dilution prohibition in Section R315-268-3.

R315-268-3. Land Disposal Restrictions -- Dilution Prohibited As a Substitute for Treatment.

(a) Except as provided in Subsection R315-268-3(b), no generator, transporter, handler, or owner or operator of a treatment, storage, or disposal facility shall in any way dilute a restricted waste or the residual from treatment of a restricted waste as a substitute for adequate treatment to achieve compliance with Sections R315-268-40 through 49, to circumvent the effective date of a prohibition in Sections R315-268-20 through 39, or to otherwise avoid a prohibition in Sections R315-268-20 through 39, or to circumvent a land disposal prohibition imposed by RCRA section 3004.

(b) Dilution of wastes that are hazardous only because they exhibit a characteristic in treatment systems which include land-based units which treat wastes subsequently discharged to a water of the United States pursuant to a permit issued under section 402 of the Clean Water Act (CWA), or which treat wastes in a CWA-equivalent treatment system, or which treat wastes for the purposes of pretreatment requirements under section 307 of the CWA is not impermissible dilution for purposes of Section R315-268-3 unless a method other than DEACT has been specified in Section R315-268-40 as the treatment standard, or unless the waste is a D003 reactive cyanide wastewater or nonwastewater.

(c) Combustion of the hazardous waste codes listed in Appendix XI of Rule R315-268 is prohibited, unless the waste, at the point of generation, or after any bona fide treatment such as cyanide destruction prior to combustion, can be demonstrated to comply with one or more of the following criteria, unless otherwise specifically prohibited from combustion:

(1) The waste contains hazardous organic constituents or cyanide at levels exceeding the constituent-specific treatment standard found in Section R315-268-48;

(2) The waste consists of organic, debris-like materials, e.g., wood, paper, plastic, or cloth, contaminated with an inorganic metal-bearing hazardous waste;

(3) The waste, at point of generation, has reasonable heating value such as greater than or equal to 5000 BTU per pound;

(4) The waste is co-generated with wastes for which combustion is a required method of treatment;

(5) The waste is subject to Federal and/or State requirements necessitating reduction of organics, including biological agents; or

(6) The waste contains greater than 1% Total Organic

Carbon (TOC).

(d) It is a form of impermissible dilution, and therefore prohibited, to add iron filings or other metallic forms of iron to lead-containing hazardous wastes in order to achieve any land disposal restriction treatment standard for lead. Lead-containing wastes include D008 wastes, wastes exhibiting a characteristic due to the presence of lead, all characteristic wastes containing lead as an underlying hazardous constituent, listed wastes containing lead as a regulated constituent, and hazardous media containing any of the aforementioned lead-containing wastes.

R315-268-4. Land Disposal Restrictions -- Treatment Surface Impoundment Exemption.

(a) Wastes which are otherwise prohibited from land disposal under Rule R315-268 may be treated in a surface impoundment or series of impoundments provided that:

- (1) Treatment of such wastes occurs in the impoundments;
- (2) The following conditions are met:

(i) Sampling and testing. For wastes with treatment standards in Sections R315-268-40 through 49 and/or prohibition levels in Sections R315-268-20 through 39 or RCRA section 3004(d), the residues from treatment are analyzed, as specified in Sections R315-268-7 or 268-32, to determine if they meet the applicable treatment standards or where no treatment standards have been established for the waste, the applicable prohibition levels. The sampling method, specified in the waste analysis plan under Section R315-264-13 or 40 CFR 265.13, which is adopted by reference, shall be designed such that representative samples of the sludge and the supernatant are tested separately rather than mixed to form homogeneous samples.

(ii) Removal. The following treatment residues, including any liquid waste, shall be removed at least annually; residues which do not meet the treatment standards promulgated under Sections R315-268-40 through 49; residues which do not meet the prohibition levels established under Sections R315-268-20 through 39 or imposed by statute, where no treatment standards have been established; residues which are from the treatment of wastes prohibited from land disposal under Sections R315-268-20 through 39, where no treatment standards have been established and no prohibition levels apply; or residues from managing listed wastes which are not delisted under Section R315-260-22. If the volume of liquid flowing through the impoundment or series of impoundments annually is greater than the volume of the impoundment or impoundments, this flow-through constitutes removal of the supernatant for the purpose of this requirement.

(iii) Subsequent management. Treatment residues may not be placed in any other surface impoundment for subsequent management.

(iv) Recordkeeping. Sampling and testing and recordkeeping provisions of Section R315-264-13 and 40 CFR 265.13, which is adopted by reference, apply.

(3) The impoundment meets the design requirements of Section R315-264-221(c) or 40 CFR 265.221(a), which is adopted by reference, regardless that the unit may not be new, expanded, or a replacement, and be in compliance with applicable ground water monitoring requirements of Sections R315-264-90 through 101 or 40 CFR 265.90 through 94, which are adopted by reference, unless:

(i) Exempted pursuant to Sections R315-264-221 (d) or (e), or to 40 CFR 265.221(c) or (d), which are adopted by reference; or,

(ii) Upon application by the owner or operator, the Director, after notice and an opportunity to comment, has granted a waiver of the requirements on the basis that the surface impoundment:

(A) Has at least one liner, for which there is no evidence that such liner is leaking;

(B) Is located more than one-quarter mile from an underground source of drinking water; and

(C) Is in compliance with generally applicable ground water monitoring requirements for facilities with permits; or,

(iii) Upon application by the owner or operator, the Director, after notice and an opportunity to comment, has granted a modification to the requirements on the basis of a demonstration that the surface impoundment is located, designed, and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

(4) The owner or operator submits to the Director a written certification that the requirements of Section R315-268-4(a)(3) have been met. The following certification is required:

I certify under penalty of law that the requirements of Section R315-268-4(a)(3) have been met for all surface impoundments being used to treat restricted wastes. I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(b) Evaporation of hazardous constituents as the principal means of treatment is not considered to be treatment for purposes of an exemption under Section R315-268-4.

R315-268-5. Land Disposal Restrictions -- Procedures for Case-by-Case Extensions to an Effective Date.

Note to Sections R315-268-5. All references to administrative positions and to regulations are to the positions and regulations of the US Environmental Protection Agency. Utah does not administer Section R315-268-5.

(a) Any person who generates, treats, stores, or disposes of a hazardous waste may submit an application to the Administrator for an extension to the effective date of any applicable restriction established under Sections R315-268-20 through 39. The applicant shall demonstrate the following:

(1) He has made a good-faith effort to locate and contract with treatment, recovery, or disposal facilities nationwide to manage his waste in accordance with the effective date of the applicable restriction established under Sections R315-268-20 through 39;

(2) He has entered into a binding contractual commitment to construct or otherwise provide alternative treatment, recovery (e.g., recycling), or disposal capacity that meets the treatment standards specified in Sections R315-268-40 through 49 or, where treatment standards have not been specified, such treatment, recovery, or disposal capacity is protective of human health and the environment.

(3) Due to circumstances beyond the applicant's control, such alternative capacity cannot reasonably be made available by the applicable effective date. This demonstration may include a showing that the technical and practical difficulties associated with providing the alternative capacity will result in the capacity not being available by the applicable effective date;

(4) The capacity being constructed or otherwise provided by the applicant shall be sufficient to manage the entire quantity of waste that is the subject of the application;

(5) He provides a detailed schedule for obtaining required operating and construction permits or an outline of how and when alternative capacity will be available;

(6) He has arranged for adequate capacity to manage his waste during an extension and has documented in the application the location of all sites at which the waste will be managed; and

(7) Any waste managed in a surface impoundment or landfill during the extension period shall meet the requirements of Subsection R315-268-5(h)(2).

(b) An authorized representative signing an application described under Subsection R315-268-5(a) shall make the

following certification:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(c) After receiving an application for an extension, the Administrator may request any additional information which he deems as necessary to evaluate the application.

(d) An extension shall apply only to the waste generated at the individual facility covered by the application and shall not apply to restricted waste from any other facility.

(e) On the basis of the information referred to in Subsection R315-268-5(a), after notice and opportunity for comment, and after consultation with appropriate State agencies in all affected States, the Administrator may grant an extension of up to 1 year from the effective date. The Administrator may renew this extension for up to 1 additional year upon the request of the applicant if the demonstration required in Subsection R315-268-5 (a) can still be made. In no event shall an extension extend beyond 24 months from the applicable effective date specified in Sections R315-268-20 through 39. The length of any extension authorized shall be determined by the Administrator based on the time required to construct or obtain the type of capacity needed by the applicant as described in the completion schedule discussed in Subsection R315-268-5(a)(5). The Administrator shall give public notice of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a petition shall be published in the Federal Register.

(f) Any person granted an extension under Section R315-268-5 shall immediately notify the Administrator as soon as he has knowledge of any change in the conditions certified to in the application.

(g) Any person granted an extension Section R315-268-5 shall submit written progress reports at intervals designated by the Administrator. Such reports shall describe the overall progress made toward constructing or otherwise providing alternative treatment, recovery or disposal capacity; shall identify any event which may cause or has caused a delay in the development of the capacity; and shall summarize the steps taken to mitigate the delay. The Administrator can revoke the extension at any time if the applicant does not demonstrate a good-faith effort to meet the schedule for completion, if the Agency denies or revokes any required permit, if conditions certified in the application change, or for any violation of Rules R315-260 through 266, 268, 270, 273, 124,15, and 101.

(h) Whenever the Administrator establishes an extension to an effective date under this section, during the period for which such extension is in effect:

(1) The storage restrictions under Subsection R315-268-50(a) do not apply; and

(2) Such hazardous waste may be disposed in a landfill or surface impoundment only if such unit is in compliance with the technical requirements of the following provisions regardless of whether such unit is existing, new, or a replacement or lateral expansion.

(i) The landfill, if in interim status, is in compliance with the requirements of subpart F of 40 CFR 265 and 40 CFR 265.301(a), (c), and (d) that is adopted by reference in Rule R315-265; or,

(ii) The landfill, if permitted, is in compliance with the requirements of Sections R315-264-90 through 101 and Subsections R315-264-301(c), (d) and (e); or

(iii) The surface impoundment, if in interim status, is in compliance with the requirements of subpart F of 40 CFR 265,

40 CFR 265.221(a),(c), and (d) that are adopted by reference in Rule R315-265, and RCRA section 3005(j)(1); or

(iv) The surface impoundment, if permitted, is in compliance with the requirements of Sections R315-264-90 through 101 and Subsections R315-264-221(c), (d) and (e); or

(v) The surface impoundment, if newly subject to RCRA section 3005(j)(1) due to the promulgation of additional listings or characteristics for the identification of hazardous waste, is in compliance with the requirements of subpart F of 40 CFR 265 that is adopted by reference in Rule R315-265 within 12 months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of 40 CFR 265.221(a), (c) and (d) that is adopted by reference in Rule R315-265 within 48 months after the promulgation of additional listings or characteristics of hazardous waste. If a national capacity variance is granted, during the period the variance is in effect, the surface impoundment, if newly subject to RCRA section 3005(j)(1) due to the promulgation of additional listings or characteristics of hazardous waste, is in compliance with the requirements of subpart F of 40 CFR 265 that is adopted by reference in Rule R315-265 within 12 months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of 40 CFR 265.221(a), (c) and (d) that is adopted by reference in Rule R315-265 within 48 months after the promulgation of additional listings or characteristics of hazardous waste; or

(vi) The landfill, if disposing of containerized liquid hazardous wastes containing PCBs at concentrations greater than or equal to 50 ppm but less than 500 ppm, is also in compliance with the requirements of 40 CFR 761.75 and Rules R264 and 265.

(i) Pending a decision on the application the applicant is required to comply with all restrictions on land disposal under Rule R315-268 once the effective date for the waste has been reached.

R315-268-6. Land Disposal Restrictions -- Petitions to Allow Land Disposal of a Waste Prohibited Under Sections R315-268-20 through 39.

Note to Section R315-268-6. All references to administrative positions and to regulations are to the positions and regulations of the US Environmental Protection Agency. Utah does not administer Section R315-268-6.

(a) Any person seeking an exemption from a prohibition under Sections R315-268-20 through 39 for the disposal of a restricted hazardous waste in a particular unit or units shall submit a petition to the Administrator demonstrating, to a reasonable degree of certainty, that there will be no migration of hazardous constituents from the disposal unit or injection zone for as long as the wastes remain hazardous. The demonstration shall include the following components:

(1) An identification of the specific waste and the specific unit for which the demonstration will be made;

(2) A waste analysis to describe fully the chemical and physical characteristics of the subject waste;

(3) A comprehensive characterization of the disposal unit site including an analysis of background air, soil, and water quality.

(4) A monitoring plan that detects migration at the earliest practicable time;

(5) Sufficient information to assure the Administrator that the owner or operator of a land disposal unit receiving restricted waste(s) shall comply with other applicable Federal, State, and local laws.

(b) The demonstration referred to in Subsection R315-268-6(a) shall meet the following criteria:

(1) All waste and environmental sampling, test, and analysis data shall be accurate and reproducible to the extent that state-of-the-art techniques allow;

(2) All sampling, testing, and estimation techniques for chemical and physical properties of the waste and all environmental parameters shall have been approved by the Administrator;

(3) Simulation models shall be calibrated for the specific waste and site conditions, and verified for accuracy by comparison with actual measurements;

(4) A quality assurance and quality control plan that addresses all aspects of the demonstration shall be approved by the Administrator; and,

(5) An analysis shall be performed to identify and quantify any aspects of the demonstration that contribute significantly to uncertainty. This analysis shall include an evaluation of the consequences of predictable future events, including, but not limited to, earthquakes, floods, severe storm events, droughts, or other natural phenomena.

(c) Each petition referred to in Subsection R315-268-6(a) shall include the following:

(1) A monitoring plan that describes the monitoring program installed at and/or around the unit to verify continued compliance with the conditions of the variance. This monitoring plan shall provide information on the monitoring of the unit and/or the environment around the unit. The following specific information shall be included in the plan:

(i) The media monitored in the cases where monitoring of the environment around the unit is required;

(ii) The type of monitoring conducted at the unit, in the cases where monitoring of the unit is required;

(iii) The location of the monitoring stations;

(iv) The monitoring interval (frequency of monitoring at each station);

(v) The specific hazardous constituents to be monitored;

(vi) The implementation schedule for the monitoring program;

(vii) The equipment used at the monitoring stations;

(viii) The sampling and analytical techniques employed;

and

(ix) The data recording/reporting procedures.

(2) Where applicable, the monitoring program described in Subsection R315-268-6(c)(1) shall be in place for a period of time specified by the Administrator, as part of his approval of the petition, prior to receipt of prohibited waste at the unit.

(3) The monitoring data collected according to the monitoring plan specified under Subsection R315-268-6(c)(1) shall be sent to the Administrator according to a format and schedule specified and approved in the monitoring plan, and

(4) A copy of the monitoring data collected under the monitoring plan specified under Subsection R315-268-6(c)(1) shall be kept on-site at the facility in the operating record.

(5) The monitoring program specified under Subsection R315-268-6(c)(1) meets the following criteria:

(i) All sampling, testing, and analytical data shall be approved by the Administrator and shall provide data that is accurate and reproducible.

(ii) All estimation and monitoring techniques shall be approved by the Administrator.

(iii) A quality assurance and quality control plan addressing all aspects of the monitoring program shall be provided to and approved by the Administrator.

(d) Each petition shall be submitted to the Administrator.

(e) After a petition has been approved, the owner or operator shall report any changes in conditions at the unit and/or the environment around the unit that significantly depart from the conditions described in the variance and affect the potential for migration of hazardous constituents from the units as follows:

(1) If the owner or operator plans to make changes to the unit design, construction, or operation, such a change shall be proposed, in writing, and the owner or operator shall submit a

demonstration to the Administrator at least 30 days prior to making the change. The Administrator shall determine whether the proposed change invalidates the terms of the petition and shall determine the appropriate response. Any change shall be approved by the Administrator prior to being made.

(2) If the owner or operator discovers that a condition at the site which was modeled or predicted in the petition does not occur as predicted, this change shall be reported, in writing, to the Administrator within 10 days of discovering the change. The Administrator shall determine whether the reported change from the terms of the petition requires further action, which may include termination of waste acceptance and revocation of the petition, petition modifications, or other responses.

(f) If the owner or operator determines that there is migration of hazardous constituent(s) from the unit, the owner or operator shall:

(1) Immediately suspend receipt of prohibited waste at the unit, and

(2) Notify the Administrator, in writing, within 10 days of the determination that a release has occurred.

(3) Following receipt of the notification the Administrator shall determine, within 60 days of receiving notification, whether the owner or operator can continue to receive prohibited waste in the unit and whether the variance is to be revoked. The Administrator shall also determine whether further examination of any migration is warranted under applicable provisions of Rules R315-264 or 265.

(g) Each petition shall include the following statement signed by the petitioner or an authorized representative:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this petition and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(h) After receiving a petition, the Administrator may request any additional information that reasonably may be required to evaluate the demonstration.

(i) If approved, the petition shall apply to land disposal of the specific restricted waste at the individual disposal unit described in the demonstration and shall not apply to any other restricted waste at that disposal unit, or to that specific restricted waste at any other disposal unit.

(j) The Administrator shall give public notice in the Federal Register of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a petition shall be published in the Federal Register.

(k) The term of a petition granted under Section R315-268-6 shall be no longer than the term of the hazardous waste permit if the disposal unit is operating under a hazardous waste permit, or up to a maximum of 10 years from the date of approval provided under Subsection R315-268-6(g) if the unit is operating under interim status. In either case, the term of the granted petition shall expire upon the termination or denial of a hazardous waste permit, or upon the termination of interim status or when the volume limit of waste to be land disposed during the term of petition is reached.

(l) Prior to the Administrator's decision, the applicant is required to comply with all restrictions on land disposal under Rule R315-268 once the effective date for the waste has been reached.

(m) The petition granted by the Administrator does not relieve the petitioner of his responsibilities in the management of hazardous waste under Rules R315-260 through part 270.

(n) Liquid hazardous wastes containing polychlorinated biphenyls at concentrations greater than or equal to 500 ppm are not eligible for an exemption under Section R315-268-6.

R315-268-7. Land Disposal Restrictions -- Testing, Tracking, and Recordkeeping Requirements for Generators, Treaters, and Disposal Facilities.

(a) Requirements for generators:

(1) A generator of hazardous waste shall determine if the waste has to be treated before it can be land disposed. This is done by determining if the hazardous waste meets the treatment standards in Sections R315-268-40, 45, or 49. This determination can be made concurrently with the hazardous waste determination required in Section R315-262-11, in either of two ways: testing the waste or using knowledge of the waste. If the generator tests the waste, testing would normally determine the total concentration of hazardous constituents, or the concentration of hazardous constituents in an extract of the waste obtained using test method 1311 in "Test Methods of Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, incorporated by reference, see Section R315-260-11, depending on whether the treatment standard for the waste is expressed as a total concentration or concentration of hazardous constituent in the waste's extract. Alternatively, the generator shall send the waste to a hazardous waste treatment facility permitted under Section 19-6-108, where the waste treatment facility shall comply with the requirements of Section R315-264-13 and Subsection R315-268-7(b). In addition, some hazardous wastes shall be treated by particular treatment methods before they can be land disposed and some soils are contaminated by such hazardous wastes. These treatment standards are also found in Section R315-268-40, and are described in detail in Section R315-268-42, Table 1. These wastes, and soils contaminated with such wastes, do not need to be tested, however, if they are in a waste mixture, other wastes with concentration level treatment standards would have to be tested. If a generator determines they are managing a waste or soil contaminated with a waste, that displays a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity, they shall comply with the special requirements of Section R315-268-9 in addition to any applicable requirements in Section R315-268-7.

(2) If the waste or contaminated soil does not meet the treatment standards, or if the generator chooses not to make the determination of whether his waste shall be treated, with the initial shipment of waste to each treatment or storage facility, the generator shall send a one-time written notice to each treatment or storage facility receiving the waste, and place a copy in the file. The notice shall include the information in column "268-7(a)(2)" of the Generator Paperwork Requirements Table in Subsection R315-268-7(a)(4). Alternatively, if the generator chooses not to make the determination of whether the waste shall be treated, the notification shall include the EPA Hazardous Waste Numbers and Manifest Number of the first shipment and shall state "This hazardous waste may or may not be subject to the LDR treatment standards. The treatment facility shall make the determination." No further notification is necessary until such time that the waste or facility change, in which case a new notification shall be sent and a copy placed in the generator's file.

(3) If the waste or contaminated soil meets the treatment standard at the original point of generation:

(i) With the initial shipment of waste to each treatment, storage, or disposal facility, the generator shall send a one-time written notice to each treatment, storage, or disposal facility receiving the waste, and place a copy in the file. The notice shall include the information indicated in column "268-7(a)(3)" of the Generator Paperwork Requirements Table in Subsection R315-268-7(a)(4) and the following certification statement, signed by an authorized representative:

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this

certification that the waste complies with the treatment standards specified in Sections R315-268-40 through 49. I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

(ii) For contaminated soil, with the initial shipment of wastes to each treatment, storage, or disposal facility, the generator shall send a one-time written notice to each facility receiving the waste and place a copy in the file. The notice shall include the information in column "268-7(a)(3)" of the Generator Paperwork Requirements Table in Subsection R315-268-7(a)(4).

(iii) If the waste changes, the generator shall send a new notice and certification to the receiving facility, and place a copy in their files. Generators of hazardous debris excluded from the definition of hazardous waste under Subsection R315-261-3(f) are not subject to these requirements.

(4) For reporting, tracking, and recordkeeping when exceptions allow certain wastes or contaminated soil that do not meet the treatment standards to be land disposed: There are certain exemptions from the requirement that hazardous wastes or contaminated soil meet treatment standards before they can be land disposed. These include, but are not limited to case-by-case extensions under Section R315-268-5, disposal in a no-migration unit under Section R315-268-6, or a national capacity variance or case-by-case capacity variance under Sections R315-268-20 through 39. If a generator's waste is so exempt, then with the initial shipment of waste, the generator shall send a one-time written notice to each land disposal facility receiving the waste. The notice shall include the information indicated in column "268-7(a)(4)" of the Generator Paperwork Requirements Table below. If the waste changes, the generator shall send a new notice to the receiving facility, and place a copy in their files.

Table

Generator Paperwork Requirements

Required information	268-7 (a)(2)	268-7 (a)(3)	268-7 (a)(4)	268-7 (a)(9)
1. EPA Hazardous Waste Numbers and Manifest Number of first shipment	X	X	X	X
2. Statement: this waste is not prohibited from land disposal			X	
3. The waste is subject to the LDRs. The constituents of concern for F001-F005, and F039, and underlying hazardous constituents in characteristic wastes, unless the waste will be treated and monitored for all constituents. If all constituents will be treated and monitored, there is no need to put them all on the LDR notice	X	X		
4. The notice shall include the applicable wastewater/nonwastewater category (see Section R315-268-2(d) and (f)) and subdivisions made within a waste code based on waste-specific criteria (such as D003 reactive cyanide)	X	X		
5. Waste analysis data, when available	X	X	X	
6. Date the waste is subject to the prohibition			X	
7. For hazardous debris, when treating with the alternative treatment technologies provided by Section R315-268-45: the contaminants subject to treatment, as described in Section R315-268-45(b); and	X		X	

an indication that these contaminants are being treated to comply with Section R315-268-45

8. For contaminated soil subject to LDRs as provided in Section R315-268-49(a), the constituents subject to treatment as described in Section R315-268-49(d), and the following statement: This contaminated soil, does/does not, contain listed hazardous waste and, does/does not, exhibit a characteristic of hazardous waste and, is subject to/complies with, the soil treatment standards as provided by Section R315-268-49(c) or the universal treatment standards

9. A certification is needed, see applicable section for exact wording

(5) If a generator is managing and treating prohibited waste or contaminated soil in tanks, containers, or containment buildings regulated under Section R315-262-34 to meet applicable LDR treatment standards found at Section R315-268-40, the generator shall develop and follow a written waste analysis plan which describes the procedures they will carry out to comply with the treatment standards. Generators treating hazardous debris under the alternative treatment standards of Table 1, Section R315-268-45, however, are not subject to these waste analysis requirements. The plan shall be kept on site in the generator's records, and the following requirements shall be met:

(i) The waste analysis plan shall be based on a detailed chemical and physical analysis of a representative sample of the prohibited waste(s) being treated, and contain all information necessary to treat the waste(s) in accordance with the requirements of Rule R315-268, including the selected testing frequency.

(ii) Such plan shall be kept in the facility's on-site files and made available to inspectors.

(iii) Wastes shipped off-site pursuant to Subsection R315-268-7(a) shall comply with the notification requirements of Subsection R315-268-7(a)(3).

(6) If a generator determines that the waste or contaminated soil is restricted based solely on his knowledge of the waste, all supporting data used to make this determination shall be retained on-site in the generator's files. If a generator determines that the waste is restricted based on testing this waste or an extract developed using the test method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as referenced in Section R315-260-11, and all waste analysis data shall be retained on-site in the generator's files.

(7) If a generator determines that he is managing a prohibited waste that is excluded from the definition of hazardous or solid waste or is exempted from regulation under Sections R315-261-2 through 6 subsequent to the point of generation, including deactivated characteristic hazardous wastes managed in wastewater treatment systems subject to the Clean Water Act (CWA) as specified at Subsection R315-261-4(a)(2) or that are CWA-equivalent, or are managed in an underground injection well regulated by the SDWA, he shall place a one-time notice describing such generation, subsequent exclusion from the definition of hazardous or solid waste or exemption from regulation under Sections R315-261-2 through 6, and the disposition of the waste, in the facility's on-site files.

(8) Generators shall retain on-site a copy of all notices, certifications, waste analysis data, and other documentation produced pursuant to Section R315-268-7 for at least three years from the date that the waste that is the subject of such

documentation was last sent to on-site or off-site treatment, storage, or disposal. The three year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Director. The requirements of Subsection R315-268-7(a) apply to solid wastes even when the hazardous characteristic is removed prior to disposal, or when the waste is excluded from the definition of hazardous or solid waste under Sections R315-261-2 through 6, or exempted from hazardous waste regulation, subsequent to the point of generation.

(9) If a generator is managing a lab pack containing hazardous wastes and wishes to use the alternative treatment standard for lab packs found at Subsection R315-268-42(c):

(i) With the initial shipment of waste to a treatment facility, the generator shall submit a notice that provides the information in column "268-7(a)(9)" in the Generator Paperwork Requirements Table of Subsection R315-268-7(a)(4), and the following certification. The certification, which shall be signed by an authorized representative and shall be placed in the generator's files, shall say the following:

I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack contains only wastes that have not been excluded under appendix IV to Rule R315-268 and that this lab pack will be sent to a combustion facility in compliance with the alternative treatment standards for lab packs at Subsection R315-268-42(c). I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

(ii) No further notification is necessary until such time that the wastes in the lab pack change, or the receiving facility changes, in which case a new notice and certification shall be sent and a copy placed in the generator's file.

(iii) If the lab pack contains characteristic hazardous wastes, D001-D043 excluding D009, underlying hazardous constituents, as defined in Subsection R315-268-2(i) need not be determined.

(iv) The generator shall also comply with the requirements in Subsections R315-268-7(a)(6) and (a)(7).

(10) Small quantity generators with tolling agreements pursuant to Subsection R315-262-20(e) shall comply with the applicable notification and certification requirements of Subsection R315-268-7(a) for the initial shipment of the waste subject to the agreement. Such generators shall retain on-site a copy of the notification and certification, together with the tolling agreement, for at least three years after termination or expiration of the agreement. The three-year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Director.

(b) Treatment facilities shall test their wastes according to the frequency specified in their waste analysis plans as required by Section R315-264-13, for permitted TSDs, or 40 CFR 265.13, which is adopted by reference, for interim status facilities. Such testing shall be performed as provided in Subsections R315-268-7(b)(1), (b)(2) and (b)(3).

(1) For wastes or contaminated soil with treatment standards expressed in the waste extract (TCLP), the owner or operator of the treatment facility shall test an extract of the treatment residues, using test method 1311, the Toxicity Characteristic Leaching Procedure, described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 as incorporated by reference in Section R315-260-11, to assure that the treatment residues extract meet the applicable treatment standards.

(2) For wastes or contaminated soil with treatment standards expressed as concentrations in the waste, the owner or operator of the treatment facility shall test the treatment residues, not an extract of such residues, to assure that they meet

the applicable treatment standards.

(3) A one-time notice shall be sent with the initial shipment of waste or contaminated soil to the land disposal facility. A copy of the notice shall be placed in the treatment facility's file.

(i) No further notification is necessary until such time that the waste or receiving facility change, in which case a new notice shall be sent and a copy placed in the treatment facility's file.

(ii) The one-time notice shall include these requirements:

Table Treatment Facility Paperwork Requirements	
Required information	268-7(b)
1. EPA Hazardous Waste Numbers and Manifest Number of first shipment	X
2. The waste is subject to the LDRs. The constituents of concern for F001-F005, and F039, and underlying hazardous constituents in characteristic wastes, unless the waste will be treated and monitored for all constituents. If all constituents will be treated and monitored, there is no need to put them all on the LDR notice.	X
3. The notice shall include the applicable wastewater/ nonwastewater category, see Subsections R315-268-2(d) and (f)) and subdivisions made within a waste code based on waste-specific criteria, such as D003 reactive cyanide	X
4. Waste analysis data, when available	X
5. For contaminated soil subject to LDRs as provided in Subsection R315-268-49(a), the constituents subject to treatment as described in Subsection R315-268-49(d) and the following statement, "this contaminated soil, does/does not, exhibit a characteristic of hazardous waste and, is subject to/complies with, the soil treatment standards as provided by Subsection R315-268-49(c)".	X
6. A certification is needed, see applicable section for exact wording	X

(4) The treatment facility shall submit a one-time certification signed by an authorized representative with the initial shipment of waste or treatment residue of a restricted waste to the land disposal facility. The certification shall state:

I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards specified in Section R315-268-40 without impermissible dilution of the prohibited waste. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

A certification is also necessary for contaminated soil and it shall state:

I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and believe that it has been maintained and operated properly so as to comply with treatment standards specified in Section R315-268-49 without impermissible dilution of the prohibited wastes. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(i) A copy of the certification shall be placed in the treatment facility's on-site files. If the waste or treatment residue changes, or the receiving facility changes, a new certification shall be sent to the receiving facility, and a copy placed in the file.

(ii) Debris excluded from the definition of hazardous waste under Subsection R315-261-3(f), i.e., debris treated by an

extraction or destruction technology provided by Table 1, Section R315-268-45, and debris that the Director has determined does not contain hazardous waste, however, is subject to the notification and certification requirements of Subsection R315-268-7(d) rather than the certification requirements of Subsection R315-268-7(b).

(iii) For wastes with organic constituents having treatment standards expressed as concentration levels, if compliance with the treatment standards is based in whole or in part on the analytical detection limit alternative specified in Subsection R315-268-40(d), the certification, signed by an authorized representative, shall state the following:

I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion units as specified in Section R315-268-42, Table 1. I have been unable to detect the nonwastewater organic constituents, despite having used best good-faith efforts to analyze for such constituents. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(iv) For characteristic wastes that are subject to the treatment standards in Section R315-268-40, other than those expressed as a method of treatment, or Section R315-268-49, and that contain underlying hazardous constituents as defined in Subsection R315-268-2(i); if these wastes are treated on-site to remove the hazardous characteristic; and are then sent off-site for treatment of underlying hazardous constituents, the certification shall state the following:

I certify under penalty of law that the waste has been treated in accordance with the requirements of Section R315-268-40 or 49 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(v) For characteristic wastes that contain underlying hazardous constituents as defined Subsection R315-268-2(i) that are treated on-site to remove the hazardous characteristic to treat underlying hazardous constituents to levels in Section R315-268-48 Universal Treatment Standards, the certification shall state the following:

I certify under penalty of law that the waste has been treated in accordance with the requirements of Section R315-268-40 to remove the hazardous characteristic and that underlying hazardous constituents, as defined in Subsection R315-268-2(i) have been treated on-site to meet the Section R315-268-48 Universal Treatment Standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(5) If the waste or treatment residue will be further managed at a different treatment, storage, or disposal facility, the treatment, storage, or disposal facility sending the waste or treatment residue off-site shall comply with the notice and certification requirements applicable to generators under Section R315-268-7.

(6) Where the wastes are recyclable materials used in a manner constituting disposal subject to the provisions of Subsection R315-266-20(b) regarding treatment standards and prohibition levels, the owner or operator of a treatment facility, i.e., the recycler, shall, for the initial shipment of waste, prepare a one-time certification described in Subsection R315-268-7(b)(4), and a one-time notice which includes the information in Subsection R315-268-7(b)(3), except the manifest number. The certification and notification shall be placed in the facility's on-

site files. If the waste or the receiving facility changes, a new certification and notification shall be prepared and placed in the on-site files. In addition, the recycling facility shall also keep records of the name and location of each entity receiving the hazardous waste-derived product.

(c) Except where the owner or operator is disposing of any waste that is a recyclable material used in a manner constituting disposal pursuant to Subsection R315-266-20(b), the owner or operator of any land disposal facility disposing any waste subject to restrictions under Rule R315-268 shall:

(1) Have copies of the notice and certifications specified in Subsection R315-268-7(a) or (b).

(2) Test the waste, or an extract of the waste or treatment residue developed using test method 1311, the Toxicity Characteristic Leaching Procedure, described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 as incorporated by reference in Section R315-260-11, to assure that the wastes or treatment residues are in compliance with the applicable treatment standards set forth in Sections R315-268-40 through 49. Such testing shall be performed according to the frequency specified in the facility's waste analysis plan as required by Section R315-264-13 or 40 CFR 265.13, which is adopted by reference.

(d) Generators or treaters who first claim that hazardous debris is excluded from the definition of hazardous waste under Subsection R315-261-3(f), i.e., debris treated by an extraction or destruction technology provided by Table 1, Section R315-268-45, and debris that the Director has determined does not contain hazardous waste, are subject to the following notification and certification requirements:

(1) A one-time notification, including the following information, shall be submitted to the Director:

(i) The name and address of the Subtitle D facility receiving the treated debris;

(ii) A description of the hazardous debris as initially generated, including the applicable EPA Hazardous Waste Number(s); and

(iii) For debris excluded under Subsection R315-261-3(f)(1), the technology from Table 1, Section R315-268-45, used to treat the debris.

(2) The notification shall be updated if the debris is shipped to a different facility, and, for debris excluded under Subsection R315-261-2(f)(1), if a different type of debris is treated or if a different technology is used to treat the debris.

(3) For debris excluded under Subsection R315-261-3(f)(1), the owner or operator of the treatment facility shall document and certify compliance with the treatment standards of Table 1, Section R315-268-45, as follows:

(i) Records shall be kept of all inspections, evaluations, and analyses of treated debris that are made to determine compliance with the treatment standards;

(ii) Records shall be kept of any data or information the treater obtains during treatment of the debris that identifies key operating parameters of the treatment unit; and

(iii) For each shipment of treated debris, a certification of compliance with the treatment standards shall be signed by an authorized representative and placed in the facility's files. The certification shall state the following: "I certify under penalty of law that the debris has been treated in accordance with the requirements of Section R315-268-45. I am aware that there are significant penalties for making a false certification, including the possibility of fine and imprisonment."

(e) Generators and treaters who first receive from the Director a determination that a given contaminated soil subject to LDRs as provided in Subsection R315-268-49(a) no longer contains a listed hazardous waste and generators and treaters who first determine that a contaminated soil subject to LDRs as provided in Subsection R315-268-49(a) no longer exhibits a characteristic of hazardous waste shall:

- (1) Prepare a one-time only documentation of these determinations including all supporting information; and,
- (2) Maintain that information in the facility files and other records for a minimum of three years.

R315-268-9. Land Disposal Restrictions -- Special Rules Regarding Wastes That Exhibit a Characteristic.

(a) The initial generator of a solid waste shall determine each EPA Hazardous Waste Number, waste code, applicable to the waste in order to determine the applicable treatment standards under Sections R315-268-40 through 49. This determination may be made concurrently with the hazardous waste determination required in Section R315-262-11. For purposes of Rule R315-268, the waste shall carry the waste code for any applicable listed waste Sections R315-261-30 through 35. In addition, where the waste exhibits a characteristic, the waste shall carry one or more of the characteristic waste codes Sections R315-261-20 through 24, except when the treatment standard for the listed waste operates in lieu of the treatment standard for the characteristic waste, as specified in Subsection R315-268-9(b). If the generator determines that their waste displays a hazardous characteristic, and is not D001 nonwastewaters treated by CMBST, RORGS, OR POLYM of Section R315-268-42, Table 1, the generator shall determine the underlying hazardous constituents, as defined at Subsection R315-268-2(i), in the characteristic waste.

(b) Where a prohibited waste is both listed under Sections R315-261-30 through 35 and exhibits a characteristic under Sections R315-261-20 through 24, the treatment standard for the waste code listed in Sections R315-261-30 through 35 shall operate in lieu of the standard for the waste code under Sections R315-261-20 through 24, provided that the treatment standard for the listed waste includes a treatment standard for the constituent that causes the waste to exhibit the characteristic. Otherwise, the waste shall meet the treatment standards for all applicable listed and characteristic waste codes.

(c) In addition to any applicable standards determined from the initial point of generation, no prohibited waste which exhibits a characteristic under Sections R315-261-20 through 24 may be land disposed unless the waste complies with the treatment standards under Sections R315-268-40 through 49.

(d) Wastes that exhibit a characteristic are also subject to Section R315-268-7 requirements, except that once the waste is no longer hazardous, a one-time notification and certification shall be placed in the generator's or treater's on-site files. The notification and certification shall be updated if the process or operation generating the waste changes and/or if the non-hazardous waste facility receiving the waste changes.

(1) The notification shall include the following information:

(i) Name and address of the non-hazardous waste facility receiving the waste shipment; and

(ii) A description of the waste as initially generated, including the applicable EPA hazardous waste code(s), treatability group(s), and underlying hazardous constituents, as defined in Subsection R315-268-2(i), unless the waste will be treated and monitored for all underlying hazardous constituents. If all underlying hazardous constituents will be treated and monitored, there is no requirement to list any of the underlying hazardous constituents on the notice.

(2) The certification shall be signed by an authorized representative and shall state the language found in Subsection R315-268-7(b)(4).

(i) If treatment removes the characteristic but does not meet standards applicable to underlying hazardous constituents, then the certification found in Subsection R315-268-7(b)(4)(iv) applies.

R315-268-13. Land Disposal Restrictions -- Schedule for**Wastes Identified or Listed After November 8, 1984.**

In the case of any hazardous waste identified or listed under section 3001 after November 8, 1984, the Administrator shall make a land disposal prohibition determination within 6 months after the date of identification or listing.

R315-268-14. Land Disposal Restrictions -- Surface Impoundment Exemptions.

(a) Section R315-268-14 defines additional circumstances under which an otherwise prohibited waste may continue to be placed in a surface impoundment.

(b) Wastes which are newly identified or listed under RCRA section 3001 after November 8, 1984, and stored in a surface impoundment that is newly subject to subtitle C of RCRA as a result of the additional identification or listing, may continue to be stored in the surface impoundment for 48 months after the promulgation of the additional listing or characteristic, notwithstanding that the waste is otherwise prohibited from land disposal, provided that the surface impoundment is in compliance with the requirements of 40 CFR 265.90 through 94, which are adopted by reference, within 12 months after promulgation of the new listing or characteristic.

(c) Wastes which are newly identified or listed under RCRA section 3001 after November 8, 1984, and treated in a surface impoundment that is newly subject to subtitle C of RCRA as a result of the additional identification or listing, may continue to be treated in that surface impoundment, notwithstanding that the waste is otherwise prohibited from land disposal, provided that surface impoundment is in compliance with the requirements of 40 CFR 265.90 through 94, which are adopted by reference, within 12 months after the promulgation of the new listing or characteristic. In addition, if the surface impoundment continues to treat hazardous waste after 48 months from promulgation of the additional listing or characteristic, it shall then be in compliance with Section R315-268-4.

R315-268-20. Land Disposal Restrictions -- Waste Specific Prohibitions -- Dyes and/or Pigments Production Wastes.

(a) Effective August 23, 2005, the waste specified in Rule R315-261 as EPA Hazardous Waste Number K181, and soil and debris contaminated with this waste, radioactive wastes mixed with this waste, and soil and debris contaminated with radioactive wastes mixed with this waste are prohibited from land disposal.

(b) The requirements of Subsection R315-268-20(a) do not apply if:

(1) The wastes meet the applicable treatment standards specified in Sections R315-268-40 through 49;

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Section R315-268-6, with respect to those wastes and units covered by the petition;

(3) The wastes meet the applicable treatment standards established pursuant to a petition granted under Section R315-268-44;

(4) Hazardous debris has met the treatment standards in Section R315-268-40 or the alternative treatment standards in Section R315-268-45; or

(5) Persons have been granted an extension to the effective date of a prohibition pursuant to Section R315-268-5, with respect to these wastes covered by the extension.

(c) To determine whether a hazardous waste identified in Section R315-268-20 exceeds the applicable treatment standards specified in Section R315-268-40, the initial generator shall test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract of the waste, or the generator may use knowledge of the waste. If the waste contains regulated constituents in excess of the applicable

Sections R315-268-40 through 49 levels, the waste is prohibited from land disposal, and all requirements of Rule R315-268 are applicable, except as otherwise specified.

R315-268-30. Land Disposal Restrictions -- Waste Specific Prohibitions -- Wood Preserving Wastes.

(a) Effective August 11, 1997, the following wastes are prohibited from land disposal: the wastes specified in Rule R315-261 as EPA Hazardous Waste numbers F032, F034, and F035.

(b) Effective May 12, 1999, the following wastes are prohibited from land disposal: soil and debris contaminated with F032, F034, F035; and radioactive wastes mixed with EPA Hazardous waste numbers F032, F034, and F035.

(c) Between May 12, 1997 and May 12, 1999, soil and debris contaminated with F032, F034, F035; and radioactive waste mixed with F032, F034, and F035 may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Subsection R315-268-5(h)(2).

(d) The requirements of Subsections R315-268-30(a) and (b) do not apply if:

(1) The wastes meet the applicable treatment standards specified in Sections R315-268-40 through 49;

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Section R315-268-6, with respect to those wastes and units covered by the petition;

(3) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under Section R315-268-44; or

(4) Persons have been granted an extension to the effective date of a prohibition pursuant to Section R315-268-5, with respect to those wastes covered by the extension.

(e) To determine whether a hazardous waste identified in Section R315-268-30 exceeds the applicable treatment standards specified in Section R315-268-40, the initial generator shall test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Universal Treatment Standard levels of Section R315-268-48, the waste is prohibited from land disposal, and all requirements of Rule R315-268 are applicable, except as otherwise specified.

R315-268-31. Land Disposal Restrictions -- Waste Specific Prohibitions--Dioxin-Containing Wastes.

(a) Effective November 8, 1988, the dioxin-containing wastes specified in Section R315-261-31 as EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, F027, and F028, are prohibited from land disposal unless the following condition applies:

(1) The F020-F023 and F026-F028 dioxin-containing waste is contaminated soil and debris resulting from a response action taken under section 104 or 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) or a corrective action taken under subtitle C of the Resource Conservation and Recovery Act (RCRA).

(b) Effective November 8, 1990, the F020-F023 and F026-F028 dioxin-containing wastes listed in Subsection R315-268-31(a)(1) are prohibited from land disposal.

(c) Between November 8, 1988, and November 8, 1990, wastes included in Subsection R315-268-31(a)(1) may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Subsection R315-268-5(h)(2) and all other applicable requirements of Rules R315-264 and 265.

(d) The requirements of Subsections R315-268-31(a) and (b) do not apply if:

(1) The wastes meet the standards of Sections R315-268-40 through 49; or

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Section R315-268-6, with respect to those wastes and units covered by the petition; or

(3) Persons have been granted an extension to the effective date of a prohibition pursuant to Section R315-268-5, with respect to those wastes covered by the extension.

R315-268-32. Land Disposal Restrictions -- Waste Specific Prohibitions -- Soils Exhibiting the Toxicity Characteristic for Metals and Containing Pcb's.

(a) Effective December 26, 2000, the following wastes are prohibited from land disposal: any volumes of soil exhibiting the toxicity characteristic solely because of the presence of metals (D004---D011) and containing PCBs.

(b) The requirements of Subsection R315-268-32(a) do not apply if:

(1)(i) The wastes contain halogenated organic compounds in total concentration less than 1,000 mg/kg; and

(ii) The wastes meet the treatment standards specified in Sections R315-268-40 through 49 for EPA hazardous waste numbers D004-D011, as applicable; or

(2)(i) The wastes contain halogenated organic compounds in total concentration less than 1,000 mg/kg; and

(ii) The wastes meet the alternative treatment standards specified in Section R315-268-49 for contaminated soil; or

(3) Persons have been granted an exemption from a prohibition pursuant to a petition under Section R315-268-6, with respect to those wastes and units covered by the petition; or

(4) The wastes meet applicable alternative treatment standards established pursuant to a petition granted under Section R315-268-44.

R315-268-33. Land Disposal Restrictions Waste Specific Prohibitions -- Chlorinated Aliphatic Wastes.

(a) Effective May 8, 2001, the wastes specified in Rule R315-261 as EPA Hazardous Wastes Numbers K174, and K175, soil and debris contaminated with these wastes, radioactive wastes mixed with these wastes, and soil and debris contaminated with radioactive wastes mixed with these wastes are prohibited from land disposal.

(b) The requirements of Subsection R315-268-33(a) do not apply if:

(1) The wastes meet the applicable treatment standards specified in Sections R315-268-40 through 49;

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Section R315-268-6, with respect to those wastes and units covered by the petition;

(3) The wastes meet the applicable treatment standards established pursuant to a petition granted under Section R315-268-44;

(4) Hazardous debris has met the treatment standards in Section R315-268-40 or the alternative treatment standards in Section R315-268-45; or

(5) Persons have been granted an extension to the effective date of a prohibition pursuant to Section R315-268-5, with respect to these wastes covered by the extension.

(c) To determine whether a hazardous waste identified in Sections R315-268-33 exceeds the applicable treatment standards specified in Section R315-268-40, the initial generator shall test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains regulated constituents in excess of the applicable levels of Sections R315-268-40 through 49, the waste is prohibited

from land disposal, and all requirements of Rule R315-268 are applicable, except as otherwise specified.

(d) Disposal of K175 wastes that have complied with all applicable Section R315-268-40 treatment standards shall also be macroencapsulated in accordance with Section R315-268-45 Table 1 unless the waste is placed in:

(1) A hazardous waste monofill containing only K175 wastes that meet all applicable Section R315-268-40 treatment standards; or

(2) A dedicated hazardous waste landfill cell in which all other wastes being co-disposed are at pH less than or equal to 6.0.

R315-268-34. Land Disposal Restrictions -- Waste Specific Prohibitions-Toxicity Characteristic Metal Wastes.

(a) Effective August 24, 1998, the following wastes are prohibited from land disposal: the wastes specified in Rule R315-261 as EPA Hazardous Waste numbers D004-D011 that are newly identified, i.e., wastes, soil, or debris identified as hazardous by the Toxic Characteristic Leaching Procedure but not the Extraction Procedure, and waste, soil, or debris from mineral processing operations that is identified as hazardous by the specifications at Rule R315-261.

(b) Effective November 26, 1998, the following waste is prohibited from land disposal: Slag from secondary lead smelting which exhibits the Toxicity Characteristic due to the presence of one or more metals.

(c) Effective May 26, 2000, the following wastes are prohibited from land disposal: newly identified characteristic wastes from elemental phosphorus processing; radioactive wastes mixed with EPA Hazardous wastes D004-D011 that are newly identified, i.e., wastes, soil, or debris identified as hazardous by the Toxic Characteristic Leaching Procedure but not the Extraction Procedure; or mixed with newly identified characteristic mineral processing wastes, soil, or debris.

(d) Between May 26, 1998 and May 26, 2000, newly identified characteristic wastes from elemental phosphorus processing, radioactive waste mixed with D004-D011 wastes that are newly identified, i.e., wastes, soil, or debris identified as hazardous by the Toxic Characteristic Leaching Procedure but not the Extraction Procedure, or mixed with newly identified characteristic mineral processing wastes, soil, or debris may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Subsection R315-268-5(h).

(e) The requirements of Subsection R315-268-34(a) and (b) do not apply if:

(1) The wastes meet the applicable treatment standards specified in Sections R315-268-40 through 49;

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Section R315-268-6, with respect to those wastes and units covered by the petition;

(3) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under Section R315-268-44; or

(4) Persons have been granted an extension to the effective date of a prohibition pursuant to Section R315-268-5, with respect to these wastes covered by the extension.

(f) To determine whether a hazardous waste identified in Section R315-268-34 exceeds the applicable treatment standards specified in Section R315-268-40, the initial generator shall test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentration in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents, including underlying hazardous constituents in characteristic wastes, in excess of the applicable Universal Treatment Standard levels of Section R315-268-48, the waste is prohibited from land disposal, and all requirements of Rule R315-268 are

applicable, except as otherwise specified.

R315-268-35. Land Disposal Restrictions -- Waste Specific Prohibitions -- Petroleum Refining Wastes.

(a) Effective February 8, 1999, the wastes specified in Rule R315-261 as EPA Hazardous Waste Numbers K169, K170, K171, and K172, soils and debris contaminated with these wastes, radioactive wastes mixed with these hazardous wastes, and soils and debris contaminated with these radioactive mixed wastes, are prohibited from land disposal.

(b) The requirements of Subsection R315-268-35(a) do not apply if:

(1) The wastes meet the applicable treatment standards specified in Sections R315-268-40 through 49;

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Section R315-268-6, with respect to those wastes and units covered by the petition;

(3) The wastes meet the applicable treatment standards established pursuant to a petition granted under Section R315-268-44;

(4) Hazardous debris that have met treatment standards in Section R315-268-40 or in the alternative treatment standards in Section R315-268-45; or

(5) Persons have been granted an extension to the effective date of a prohibition pursuant to Section R315-268-5, with respect to these wastes covered by the extension.

(c) To determine whether a hazardous waste identified in Section R315-268-35 exceeds the applicable treatment standards specified in Section R315-268-40, the initial generator shall test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Universal Treatment Standard levels of Section R315-268-48, the waste is prohibited from land disposal, and all requirements of Rule R315-268 are applicable, except as otherwise specified.

R315-268-36. Land Disposal Restrictions -- Waste Specific Prohibitions-Inorganic Chemical Wastes.

(a) Effective May 20, 2002, the wastes specified in Rule R315-261 as EPA Hazardous Waste Numbers K176, K177, and K178, and soil and debris contaminated with these wastes, radioactive wastes mixed with these wastes, and soil and debris contaminated with radioactive wastes mixed with these wastes are prohibited from land disposal.

(b) The requirements of Subsection R315-268-36(a) do not apply if:

(1) The wastes meet the applicable treatment standards specified in Sections R315-268-40 through 49;

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Section R315-268-6, with respect to those wastes and units covered by the petition;

(3) The wastes meet the applicable treatment standards established pursuant to a petition granted under Section R315-268-44;

(4) Hazardous debris has met the treatment standards in Section R315-268-40 or the alternative treatment standards in Section R315-268-45; or

(5) Persons have been granted an extension to the effective date of a prohibition pursuant to Section R315-268-5, with respect to these wastes covered by the extension.

(c) To determine whether a hazardous waste identified in Section R315-268-36 exceeds the applicable treatment standards specified in Section R315-268-40, the initial generator shall test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste

contains regulated constituents in excess of the applicable Sections R315-268-40 through 49 levels, the waste is prohibited from land disposal, and all requirements of Rule R315-268 are applicable, except as otherwise specified.

R315-268-37. Land Disposal Restrictions -- Waste Specific Prohibitions -- Ignitable and Corrosive Characteristic Wastes Whose Treatment Standards Were Vacated.

(a) Effective August 9, 1993, the wastes specified in Section R315-261-21 as D001, and is not in the High TOC Ignitable Liquids Subcategory, and specified in Section R315-261-22 as D002, that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that inject in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal, are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or greater than these technologies.

(b) Effective February 10, 1994, the wastes specified in Section R315-261-21 as D001, and is not in the High TOC Ignitable Liquids Subcategory, and specified in Section R315-261-22 as D002, that are managed in systems defined in 40 CFR 144.6(e) and 146.6(e) as Class V injection wells, that do not engage in CWA-equivalent treatment before injection, are prohibited from land disposal.

R315-268-38. Land Disposal Restrictions -- Waste Specific Prohibitions--Newly Identified Organic Toxicity Characteristic Wastes and Newly Listed Coke By-Product and Chlorotoluene Production Wastes.

(a) Effective December 19, 1994, the wastes specified in Section R315-261-32 as EPA Hazardous Waste numbers K141, K142, K143, K144, K145, K147, K148, K149, K150, and K151 are prohibited from land disposal. In addition, debris contaminated with EPA Hazardous Waste numbers F037, F038, K107-K112, K117, K118, K123-K126, K131, K132, K136, U328, U353, U359, and soil and debris contaminated with D012-D043, K141-K145, and K147-K151 are prohibited from land disposal. The following wastes that are specified in Section R315-261-24, Table 1 as EPA Hazardous Waste numbers: D012, D013, D014, D015, D016, D017, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043 that are not radioactive, or that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that are zero dischargers that do not engage in CWA-equivalent treatment before ultimate land disposal, or that are injected in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or better than these technologies.

(b) On September 19, 1996, radioactive wastes that are mixed with D018-D043 that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that inject in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal, are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide,

precipitation/sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or greater than these technologies. Radioactive wastes mixed with K141-K145, and K147-K151 are also prohibited from land disposal. In addition, soil and debris contaminated with these radioactive mixed wastes are prohibited from land disposal.

(c) Between December 19, 1994 and September 19, 1996, the wastes included in Subsection R315-268-38(b) may be disposed in a landfill or surface impoundment, only if such unit is in compliance with the requirements specified in Subsection R315-268-5(h)(2).

(d) The requirements of Subsections R315-268-38(a), (b), and (c) do not apply if:

(1) The wastes meet the applicable treatment standards specified in Sections R315-268-40 through 49;

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Section R315-268-6, with respect to those wastes and units covered by the petition;

(3) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under Section R315-268-44;

(4) Persons have been granted an extension to the effective date of a prohibition pursuant to Section R315-268-5, with respect to these wastes covered by the extension.

(e) To determine whether a hazardous waste identified in Section R315-268-38 exceeds the applicable treatment standards specified in Section R315-268-40, the initial generator shall test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Sections R315-268-40 through 49, the waste is prohibited from land disposal, and all requirements of Rule R315-268 are applicable, except as otherwise specified.

R315-268-39. Land Disposal Restrictions -- Waste Specific Prohibitions -- Spent Aluminum Potliners; Reactive; and Carbamate Wastes.

(a) On July 8, 1996, the wastes specified in Section R315-261-32 as EPA Hazardous Waste numbers K156-K159, and K161; and in Section R315-261-33 as EPA Hazardous Waste numbers P127, P128, P185, P188-P192, P194, P196-P199, P201-P205, U271, U278-U280, U364, U367, U372, U373, U387, U389, U394, U395, U404, and U409-U411 are prohibited from land disposal. In addition, soil and debris contaminated with these wastes are prohibited from land disposal.

(b) On July 8, 1996, the wastes identified in Section R315-261-23 as D003 that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that inject in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal, are prohibited from land disposal. This prohibition does not apply to unexploded ordnance and other explosive devices which have been the subject of an emergency response. Such D003 wastes are prohibited unless they meet the treatment standard of DEACT before land disposal, see Section R315-268-40.

(c) On September 21, 1998, the wastes specified in Section R315-261-32 as EPA Hazardous Waste number K088 are prohibited from land disposal. In addition, soil and debris contaminated with these wastes are prohibited from land disposal.

(d) On April 8, 1998, radioactive wastes mixed with K088, K156-K159, K161, P127, P128, P185, P188-P192, P194, P196-P199, P201-P205, U271, U278-U280, U364, U367, U372,

U373, U387, U389, U394, U395, U404, and U409-U411 are prohibited from land disposal. In addition, soil and debris contaminated with these radioactive mixed wastes are prohibited from land disposal.

(e) Between July 8, 1996, and April 8, 1998, the wastes included in Subsections R315-268-39(a), (c), and (d) may be disposed in a landfill or surface impoundment, only if such unit is in compliance with the requirements specified in Subsection R315-268-5(h)(2).

(f) The requirements of Subsections R315-268-39(a), (b), (c), and (d) do not apply if:

(1) The wastes meet the applicable treatment standards specified in Sections R315-268-40 through 49;

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Section R315-268-6, with respect to those wastes and units covered by the petition;

(3) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under Section R315-268-44;

(4) Persons have been granted an extension to the effective date of a prohibition pursuant to Section R315-268-5, with respect to these wastes covered by the extension.

(g) To determine whether a hazardous waste identified in Section R315-268-39 exceeds the applicable treatment standards specified in Section R315-268-40, the initial generator shall test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Sections R315-268-40 through 49, the waste is prohibited from land disposal, and all requirements of Rule R315-268 are applicable, except as otherwise specified.

R315-268-40. Land Disposal Restrictions -- Applicability of Treatment Standards.

(a) A prohibited waste identified in the table "Treatment Standards for Hazardous Wastes" may be land disposed only if it meets the requirements found in the table. For each waste, the table identifies one of three types of treatment standard requirements:

(1) All hazardous constituents in the waste or in the treatment residue shall be at or below the values found in the table for that waste ("total waste standards"); or

(2) The hazardous constituents in the extract of the waste or in the extract of the treatment residue shall be at or below the values found in the table ("waste extract standards"); or

(3) The waste shall be treated using the technology specified in the table ("technology standard"), which are described in detail in Section R315-268-42, Table 1-Technology Codes and Description of Technology-Based Standards.

(b) For wastewaters, compliance with concentration level standards is based on maximums for any one day, except for D004 through D011 wastes for which the previously promulgated treatment standards based on grab samples remain in effect. For all nonwastewaters, compliance with concentration level standards is based on grab sampling. For wastes covered by the waste extract standards, the test Method 1311, the Toxicity Characteristic Leaching Procedure found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section R315-260-11, shall be used to measure compliance. An exception is made for D004 and D008, for which either of two test methods may be used: Method 1311, or Method 1310B, the Extraction Procedure Toxicity Test. For wastes covered by a technology standard, the wastes may be land disposed after being treated using that specified technology or an equivalent treatment technology approved by the Administrator under the procedures set forth in Section R315-268-42(b).

(c) When wastes with differing treatment standards for a constituent of concern are combined for purposes of treatment, the treatment residue shall meet the lowest treatment standard for the constituent of concern.

(d) Notwithstanding the prohibitions specified in Subsection R315-268-40(a), treatment and disposal facilities may demonstrate, and certify pursuant to Subsection R315-268-7(b)(5), compliance with the treatment standards for organic constituents specified by a footnote in the table "Treatment Standards for Hazardous Wastes" in Section R315-268-40, provided the following conditions are satisfied:

(1) The treatment standards for the organic constituents were established based on incineration in units operated in accordance with the technical requirements of Section R315-264-340 through 351, or based on combustion in fuel substitution units operating in accordance with applicable technical requirements;

(2) The treatment or disposal facility has used the methods referenced in Subsection R315-268-40(d)(1) to treat the organic constituents; and

(3) The treatment or disposal facility may demonstrate compliance with organic constituents if good-faith analytical efforts achieve detection limits for the regulated organic constituents that do not exceed the treatment standards specified in Section R315-268-40 by an order of magnitude.

(e) For characteristic wastes (D001-D043) that are subject to treatment standards in the following table "Treatment Standards for Hazardous Wastes," and are not managed in a wastewater treatment system that is regulated under the Clean Water Act (CWA), that is CWA-equivalent, or that is injected into a Class I nonhazardous deep injection well, all underlying hazardous constituents, as defined in Section R315-268-2(i), shall meet Universal Treatment Standards, found in Section R315-268-48, Table Universal Treatment Standards, prior to land disposal as defined in Subsection R315-268-2(c).

(f) The treatment standards for F001-F005 nonwastewater constituents carbon disulfide, cyclohexanone, and/or methanol apply to wastes which contain only one, two, or three of these constituents. Compliance is measured for these constituents in the waste extract from test Method 1311, the Toxicity Characteristic Leaching Procedure found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section R315-260-11. If the waste contains any of these three constituents along with any of the other 25 constituents found in F001-F005, then compliance with treatment standards for carbon disulfide, cyclohexanone, and/or methanol are not required.

(g) Between August 26, 1996 and March 4, 1999 the treatment standards for the wastes specified in Section R315-261-32 as EPA Hazardous Waste numbers K156-K161; and in Section R315-261-33 as EPA Hazardous Waste numbers P127, P128, P185, P188-P192, P194, P196-P199, P201-P205, U271, U277-U280, U364-U367, U372, U373, U375-U379, U381-U387, U389-U396, U400-U404, U407, and U409-U411; and soil contaminated with these wastes; may be satisfied by either meeting the constituent concentrations presented in the table "Treatment Standards for Hazardous Wastes" in Section R315-268-40, or by treating the waste by the following technologies: combustion, as defined by the technology code CMBST at Section R315-268-42 Table 1, for nonwastewaters; and, biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technology code CMBST at Section R315-268-42 Table 1, for wastewaters.

(h) Prohibited D004-D011 mixed radioactive wastes and mixed radioactive listed wastes containing metal constituents, that were previously treated by stabilization to the treatment

standards in effect at that time and then put into storage, do not have to be re-treated to meet treatment standards in Section R315-268-40 prior to land disposal.

(i) Reserved

(j) Effective September 4, 1998, the treatment standards for the wastes specified in Section R315-261-33 as EPA Hazardous Waste numbers P185, P191, P192, P197, U364, U394, and U395 may be satisfied by either meeting the constituent concentrations presented in the table "Treatment Standards for Hazardous Wastes" in Section R315-268-40, or by treating the waste by the following technologies: combustion, as defined by the technology code CMBST at Section R315-268-42 Table 1, for nonwastewaters; and, biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technology code CMBST at Section R315-268-42 Table 1, for wastewaters.

Table Treatment Standards for Hazardous Wastes and the Footnotes To Treatment Standards Standard Table in 40 CFR 268.40, 2015 edition, are adopted and incorporated by reference.

R315-268-41. Land Disposal Restrictions -- Treatment Standards Expressed as Concentrations in Waste Extract.

For the requirements previously found in Section R315-268-41 and for treatment standards in Table CCWE-Constituent Concentrations in Waste Extracts, refer to Section R315-268-40.

R315-268-42. Land Disposal Restrictions -- Treatment Standards Expressed as Specified Technologies.

Note: For the requirements previously found in Section R315-268-42 in Table 2-Technology-Based Standards By RCRA Waste Code, and Table 3-Technology-Based Standards for Specific Radioactive Hazardous Mixed Waste, refer to Section R315-268-40.

(a) The following wastes in the table in R315-268-40 "Treatment Standards for Hazardous Wastes," for which standards are expressed as a treatment method rather than a concentration level, shall be treated using the technology or technologies specified in the table entitled "Technology Codes and Description of Technology-Based Standards" in Section R315-268-42.

Table 1

Technology code	Description of technology-based standards
ADGAS:	Venting of compressed gases into an absorbing or reacting media (i.e., solid or liquid)---venting can be accomplished through physical release utilizing valves/piping; physical penetration of the container; and/or penetration through detonation.
AMLGM:	Amalgamation of liquid, elemental mercury contaminated with radioactive materials utilizing inorganic reagents such as copper, zinc, nickel, gold, and sulfur that result in a nonliquid, semi-solid amalgam and thereby reducing potential emissions of elemental mercury vapors to the air.
BIODG:	Biodegradation of organics or non-metallic inorganics (i.e., degradable inorganics that contain the elements of phosphorus, nitrogen, and sulfur) in units operated under either aerobic or anaerobic conditions such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals, e.g., Total Organic Carbon can often be used as an indicator parameter for the biodegradation of many organic constituents that cannot be directly analyzed in wastewater residues.
CARBN:	Carbon adsorption, granulated or powdered, of

CHOXD:	Chemical or electrolytic oxidation utilizing the following oxidation reagents, or waste reagents, or combinations of reagents: (1) Hypochlorite, e.g., bleach; (2) chlorine; (3) chlorine dioxide; (4) ozone or UV, ultraviolet light, assisted ozone; (5) peroxides; (6) persulfates; (7) perchlorates; (8) permangantes; and/or (9) other oxidizing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals, e.g., Total Organic Carbon can often be used as an indicator parameter for the oxidation of many organic constituents that cannot be directly analyzed in wastewater residues. Chemical oxidation specifically includes what is commonly referred to as alkaline chlorination.
CHRED:	Chemical reduction utilizing the following reducing reagents, or waste reagents, or combinations of reagents: (1) Sulfur dioxide; (2) sodium, potassium, or alkali salts or sulfites, bisulfites, metabisulfites, and polyethylene glycols, e.g., NaPEG and KPEG; (3) sodium hydrosulfide; (4) ferrous salts; and/or (5) other reducing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals, e.g., Total Organic Halogens can often be used as an indicator parameter for the reduction of many halogenated organic constituents that cannot be directly analyzed in wastewater residues. Chemical reduction is commonly used for the reduction of hexavalent chromium to the trivalent state.
CMBST:	High temperature organic destruction technologies, such as combustion in incinerators, boilers, or industrial furnaces operated in accordance with the applicable requirements of Sections R315-264-340 through 351, 40 CFR 265.340 through 352, which are adopted by reference, or Sections R315-266-100 through 112, and in other units operated in accordance with applicable technical operating requirements; and certain non-combustive technologies, such as the Catalytic Extraction Process.
DEACT:	Deactivation to remove the hazardous characteristics of a waste due to its ignitability, corrosivity, and/or reactivity.
FSUBS:	Fuel substitution in units operated in accordance with applicable technical operating requirements.
HLVIT:	Vitrification of high level mixed radioactive wastes in units in compliance with all applicable radioactive protection requirements under control of the Nuclear Regulatory Commission.
IMERC:	Incineration of wastes containing organics and mercury in units operated in accordance with the technical operating requirements of Sections R315-264-340 through 351 and 40 CFR 265.340 through 352, which are adopted by reference. All wastewater and nonwastewater residues derived from this process shall then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories, e.g., High or Low Mercury Subcategories.
INCIN:	Incineration in units operated in accordance with the technical operating requirements of Sections R315-264-340 through 351 and 40 CFR 265.340 through 352, which are adopted by reference.
LLEXT:	Liquid-liquid extraction, often referred to as solvent extraction, of organics from liquid non-metallic inorganics, organo-metallics, and/or organic constituents, operated such that a surrogate compound or indicator parameter has not undergone breakthrough, e.g., Total Organic Carbon can often be used as an indicator parameter for the adsorption of many organic constituents that cannot be directly analyzed in wastewater residues. Breakthrough occurs when the carbon has become saturated with the constituent, or indicator parameter, and substantial change in adsorption rate associated with that constituent occurs.

	wastes into an immiscible solvent for which the hazardous constituents have a greater solvent affinity, resulting in an extract high in organics that shall undergo either incineration, reuse as a fuel, or other recovery/reuse and a raffinate, extracted liquid waste, proportionately low in organics that shall undergo further treatment as specified in the standard.		crystallization,- Note: This does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration, including ultrafiltration, and centrifugation, when used in conjunction with the above listed recovery technologies.
MACRO:	Macroencapsulation with surface coating materials such as polymeric organics, e.g., resins and plastics, or with a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media. Macroencapsulation specifically does not include any material that would be classified as a tank or container according to Section R315-260-10.	RORG:	Recovery of organics utilizing one or more of the following technologies: (1) Distillation; (2) thin film evaporation; (3) steam stripping; (4) carbon adsorption; (5) critical fluid extraction; (6) liquid-liquid extraction; (7) precipitation/crystallization, including freeze crystallization; or (8) chemical phase separation techniques, i.e., addition of acids, bases, demulsifiers, or similar chemicals;-Note: this does not preclude the use of other physical phase separation techniques such as a decantation, filtration, including ultrafiltration, and centrifugation, when used in conjunction with the above listed recovery technologies.
NEUTR:	Neutralization with the following reagents, or waste reagents, or combinations of reagents: (1) Acids; (2) bases; or (3) water, including wastewaters, resulting in a pH greater than 2 but less than 12.5 as measured in the aqueous residuals.	RTHRM:	Thermal recovery of metals or inorganics from nonwastewaters in units identified as industrial furnaces according to Subsections R315-260-10(1), (6), (7), (11), and (12) under the definition of "industrial furnaces".
NLDBR:	No land disposal based on recycling.	RZINC:	Resmelting in high temperature metal recovery units for the purpose of recovery of zinc.
POLYM:	Formation of complex high-molecular weight solids through polymerization of monomers in high-TOC D001 non-wastewaters which are chemical components in the manufacture of plastics.	STABL:	Stabilization with the following reagents, or waste reagents, or combinations of reagents: (1) Portland cement; or (2) lime/pozzolans, e.g., fly ash and cement kiln dust, -this does not preclude the addition of reagents, e.g., iron salts, silicates, and clays, designed to enhance the set/cure time and/or compressive strength, or to overall reduce the leachability of the metal or inorganic.
PRECP:	Chemical precipitation of metals and other inorganics as insoluble precipitates of oxides, hydroxides, carbonates, sulfides, sulfates, chlorides, fluorides, or phosphates. The following reagents, or waste reagents, are typically used alone or in combination: (1) Lime, i.e., containing oxides and/or hydroxides of calcium and/or magnesium; (2) caustic, i.e., sodium and/or potassium hydroxides; (3) soda ash, i.e., sodium carbonate; (4) sodium sulfide; (5) ferric sulfate or ferric chloride; (6) alum; or (7) sodium sulfate. Additional flocculating, coagulation or similar reagents/processes that enhance sludge dewatering characteristics are not precluded from use.	SSTRP:	Steam stripping of organics from liquid wastes utilizing direct application of steam to the wastes operated such that liquid and vapor flow rates, as well as temperature and pressure ranges, have been optimized, monitored, and maintained. These operating parameters are dependent upon the design parameters of the unit, such as the number of separation stages and the internal column design, thus, resulting in a condensed extract high in organics that shall undergo either incineration, reuse as a fuel, or other recovery/reuse and an extracted wastewater that shall undergo further treatment as specified in the standard.
RBERY:	Thermal recovery of Beryllium.	VTD:	Vacuum thermal desorption of low-level radioactive hazardous mixed waste in units in compliance with all applicable radioactive protection requirements under control of the Nuclear Regulatory Commission.
RCGAS:	Recovery/reuse of compressed gases including techniques such as reprocessing of the gases for reuse/resale; filtering/adsorption of impurities; remixing for direct reuse or resale; and use of the gas as a fuel source.	WETOX:	Wet air oxidation performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals, e.g., Total Organic Carbon can often be used as an indicator parameter for the oxidation of many organic constituents that cannot be directly analyzed in wastewater residues.
RCORR:	Recovery of acids or bases utilizing one or more of the following recovery technologies: (1) Distillation, i.e., thermal concentration; (2) ion exchange; (3) resin or solid adsorption; (4) reverse osmosis; and/or (5) incineration for the recovery of acid-Note: this does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration, including ultrafiltration, and centrifugation, when used in conjunction with the above listed recovery technologies.	WTRRX:	Controlled reaction with water for highly reactive inorganic or organic chemicals with precautionary controls for protection of workers from potential violent reactions as well as precautionary controls for potential emissions of toxic/ignitable levels of gases released during the reaction.
RLEAD:	Thermal recovery of lead in secondary lead smelters.		
RMERC:	Retorting or roasting in a thermal processing unit capable of volatilizing mercury and subsequently condensing the volatilized mercury for recovery. The retorting or roasting unit, or facility, shall be subject to one or more of the following: (a) a National Emissions Standard for Hazardous Air Pollutants (NESHAP) for mercury; (b) a Best Available Control Technology (BACT) or a Lowest Achievable Emission Rate (LAER) standard for mercury imposed pursuant to a Prevention of Significant Deterioration (PSD) permit; or (c) a state permit that establishes emission limitations, within meaning of section 302 of the Clean Air Act, for mercury. All wastewater and nonwastewater residues derived from this process shall then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories, e.g., High or Low Mercury Subcategories.		
RMETL:	Recovery of metals or inorganics utilizing one or more of the following direct physical/removal technologies: (1) Ion exchange; (2) resin or solid, i.e., zeolites, adsorption; (3) reverse osmosis; (4) chelation/solvent extraction; (5) freeze crystallization; (6) ultrafiltration and/or (7) simple precipitation, i.e.,		

Note 1: When a combination of these technologies, i.e., a treatment train, is specified as a single treatment standard, the order of application is specified in Section R315-268-42, Table 2 by indicating the five letter technology code that shall be applied first, then the designation "fb," an abbreviation for "followed by," then the five letter technology code for the technology that shall be applied next, and so on.

Note 2: When more than one technology, or treatment train, are specified as alternative treatment standards, the five letter technology codes, or the treatment trains, are separated by a semicolon (;) with the last technology preceded by the word "OR".

This indicates that any one of these BDAT technologies or treatment trains can be used for compliance with the standard.

(b) Any person may submit an application to the Administrator demonstrating that an alternative treatment method can achieve a measure of performance equivalent to that achieved by methods specified in Subsection R315-268-42(a), (c), and (d) for wastes or specified in Table 1 of Section R315-268-45 for hazardous debris. The applicant shall submit information demonstrating that his treatment method is in compliance with federal, state, and local requirements and is protective of human health and the environment. On the basis of such information and any other available information, the Administrator may approve the use of the alternative treatment method if he finds that the alternative treatment method provides a measure of performance equivalent to that achieved by methods specified in Subsections R315-268-42(a), (c), and (d) for wastes or in Table 1 of Section R315-268-45 for hazardous debris. Any approval shall be stated in writing and may contain such provisions and conditions as the Administrator deems appropriate. The person to whom such approval is issued shall comply with all limitations contained in such a determination.

(c) As an alternative to the otherwise applicable Sections R315-268-40 through 49 treatment standards, lab packs are eligible for land disposal provided the following requirements are met:

(1) The lab packs comply with the applicable provisions of Section R315-264-316 and 40 CFR 265.316, which is adopted by reference;

(2) The lab pack does not contain any of the wastes listed in Appendix IV to Rule R315-268;

(3) The lab packs are incinerated in accordance with the requirements of Sections R315-264-340 through 351, or 40 CFR 265.340 through 352, which are adopted by reference; and

(4) Any incinerator residues from lab packs containing D004, D005, D006, D007, D008, D010, and D011 are treated in compliance with the applicable treatment standards specified for such wastes in Sections R315-268-40 through 49.

(d) Radioactive hazardous mixed wastes are subject to the treatment standards in Section R315-268-40. Where treatment standards are specified for radioactive mixed wastes in the Table of Treatment Standards, those treatment standards shall govern. Where there is no specific treatment standard for radioactive mixed waste, the treatment standard for the hazardous waste, as designated by EPA waste code, applies. Hazardous debris containing radioactive waste is subject to the treatment standards specified in Section R315-268-45.

R315-268-43. Land Disposal Restrictions -- Treatment Standards Expressed as Waste Concentrations.

For the requirements previously found in Section R315-268-43 and for treatment standards in Table CCW-Constituent Concentrations in Wastes, refer to Section R315-268-40.

R315-268-44. Land Disposal Restrictions -- Variance From a Treatment Standard.

(a) Based on a petition filed by a generator or treater of hazardous waste, the Administrator may approve a variance from an applicable treatment standard if:

(1) It is not physically possible to treat the waste to the level specified in the treatment standard, or by the method specified as the treatment standard. To show that this is the case, the petitioner shall demonstrate that because the physical or chemical properties of the waste differ significantly from waste analyzed in developing the treatment standard, the waste cannot be treated to the specified level or by the specified method; or

(2) It is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though such treatment is technically possible. To show that this is the case, the petitioner shall either demonstrate that:

(i) Treatment to the specified level or by the specified method is technically inappropriate, for example, resulting in combustion of large amounts of mildly contaminated environmental media; or

(ii) For remediation waste only, treatment to the specified level or by the specified method is environmentally inappropriate because it would likely discourage aggressive remediation.

(b) Each petition shall be submitted in accordance with the procedures in 40 CFR 260.20.

(c) Each petition shall include the following statement signed by the petitioner or an authorized representative:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this petition and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(d) After receiving a petition for variance from a treatment standard, the Administrator may request any additional information or samples which he may require to evaluate the petition. Additional copies of the complete petition may be requested as needed to send to affected states and Regional Offices.

(e) The Administrator shall give public notice in the Federal Register of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a variance from a treatment standard shall be published in the Federal Register.

(f) A generator, treatment facility, or disposal facility that is managing a waste covered by a variance from the treatment standards shall comply with the waste analysis requirements for restricted wastes found under Section R315-268-7.

(g) During the petition review process, the applicant is required to comply with all restrictions on land disposal under Rule R315-268 once the effective date for the waste has been reached.

(h) Based on a petition filed by a generator or treater of hazardous waste, the Director may approve a site-specific variance from an applicable treatment standard if:

(1) It is not physically possible to treat the waste to the level specified in the treatment standard, or by the method specified as the treatment standard. To show that this is the case, the petitioner shall demonstrate that because the physical or chemical properties of the waste differ significantly from waste analyzed in developing the treatment standard, the waste cannot be treated to the specified level or by the specified method; or

(2) It is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though such treatment is technically possible. To show that this is the case, the petitioner shall either demonstrate that:

(i) Treatment to the specified level or by the specified method is technically inappropriate, for example, resulting in combustion of large amounts of mildly contaminated environmental media where the treatment standard is not based on combustion of such media; or

(ii) For remediation waste only, treatment to the specified level or by the specified method is environmentally inappropriate because it would likely discourage aggressive remediation.

(3) For contaminated soil only, treatment to the level or by the method specified in the soil treatment standards would result in concentrations of hazardous constituents that are below, i.e., lower than, the concentrations necessary to minimize short- and long-term threats to human health and the environment.

Treatment variances approved under Subsection R315-268-44(h) shall:

(i) At a minimum, impose alternative land disposal restriction treatment standards that, using a reasonable maximum exposure scenario:

(A) For carcinogens, achieve constituent concentrations that result in the total excess risk to an individual exposed over a lifetime generally falling within a range from 10⁻⁴ to 10⁻⁶; and

(B) For constituents with non-carcinogenic effects, achieve constituent concentrations that an individual could be exposed to on a daily basis without appreciable risk of deleterious effect during a lifetime.

(ii) Not consider post-land-disposal controls.

(4) For contaminated soil only, treatment to the level or by the method specified in the soil treatment standards would result in concentrations of hazardous constituents that are below, i.e., lower than, natural background concentrations at the site where the contaminated soil will be land disposed.

(5) Public notice and a reasonable opportunity for public comment shall be provided before granting or denying a petition.

(i) Each application for a site-specific variance from a treatment standard shall include the information in Subsections R315-260-20(b)(1)-(4);

(j) After receiving an application for a site-specific variance from a treatment standard, the Director may request any additional information or samples which may be required to evaluate the application.

(k) A generator, treatment facility, or disposal facility that is managing a waste covered by a site-specific variance from a treatment standard shall comply with the waste analysis requirements for restricted wastes found under Section R315-268-7.

(l) During the application review process, the applicant for a site-specific variance shall comply with all restrictions on land disposal under Rule R315-268 once the effective date for the waste has been reached.

(m) For all variances, the petitioner shall also demonstrate that compliance with any given treatment variance is sufficient to minimize threats to human health and the environment posed by land disposal of the waste. In evaluating this demonstration, EPA or the Director, whichever is applicable, may take into account whether a treatment variance should be approved if the subject waste is to be used in a manner constituting disposal pursuant to Sections R315-266-20 through 23.

(n) (Reserved)

(o) The following facilities are excluded from the treatment standards under Section R315-268-40, and are subject to the following constituent concentrations:

EnergySolutions LLC, Clive, UT -- This site-specific treatment variance applies only to solid treatment residue resulting from the vacuum thermal desorption (VTD) of P- and U-listed hazardous waste containing radioactive contamination, "mixed waste," at the EnergySolutions' LLC facility in Clive, Utah that otherwise requires CMBST as the LDR treatment standard. Once the P- and U-listed mixed waste are treated using VTD, the solid treatment residue can be land disposed at EnergySolutions' onsite RCRA permitted mixed waste landfill without further treatment. This treatment variance is conditioned on EnergySolutions complying with a Waste Family Demonstration Testing Plan specifically addressing the treatment of these P- and U-listed wastes, with this plan being implemented through a RCRA Part B permit modification for the VTD unit.

R315-268-45. Land Disposal Restrictions -- Treatment Standards for Hazardous Debris.

(a) Treatment standards. Hazardous debris shall be treated

prior to land disposal as follows unless the Director determines under Subsection R315-261-3(f)(2) that the debris is no longer contaminated with hazardous waste or the debris is treated to the waste-specific treatment standard provided in Sections R315-268-40 through 49 for the waste contaminating the debris:

(1) General. Hazardous debris shall be treated for each "contaminant subject to treatment" defined by Subsection R315-268-45(b) using the technology or technologies identified in Table 1 of Section R315-268-45.

(2) Characteristic debris. Hazardous debris that exhibits the characteristic of ignitability, corrosivity, or reactivity identified under Sections R315-261-21, 22, and 23, respectively, shall be deactivated by treatment using one of the technologies identified in Table 1 of Section R315-268-45.

(3) Mixtures of debris types. The treatment standards of Table 1 in Section R315-268-45 shall be achieved for each type of debris contained in a mixture of debris types. If an immobilization technology is used in a treatment train, it shall be the last treatment technology used.

(4) Mixtures of contaminant types. Debris that is contaminated with two or more contaminants subject to treatment identified under Subsection R315-268-45(b) shall be treated for each contaminant using one or more treatment technologies identified in Table 1 of Section R315-268-45. If an immobilization technology is used in a treatment train, it shall be the last treatment technology used.

(5) Waste PCBs. Hazardous debris that is also a waste PCB under 40 CFR part 761 is subject to the requirements of either 40 CFR part 761 or the requirements of Section R315-268-45, whichever are more stringent.

(b) Contaminants subject to treatment. Hazardous debris shall be treated for each "contaminant subject to treatment." The contaminants subject to treatment shall be determined as follows:

(1) Toxicity characteristic debris. The contaminants subject to treatment for debris that exhibits the Toxicity Characteristic (TC) by Section R315-261-24 are those EP constituents for which the debris exhibits the TC toxicity characteristic.

(2) Debris contaminated with listed waste. The contaminants subject to treatment for debris that is contaminated with a prohibited listed hazardous waste are those constituents or wastes for which treatment standards are established for the waste under Section R315-268-40.

(3) Cyanide reactive debris. Hazardous debris that is reactive because of cyanide shall be treated for cyanide.

(c) Conditioned exclusion of treated debris. Hazardous debris that has been treated using one of the specified extraction or destruction technologies in Table 1 of Section R315-268-45 and that does not exhibit a characteristic of hazardous waste identified under Sections R315-261-20 through 24 after treatment is not a hazardous waste and need not be managed in a hazardous waste facility. Hazardous debris contaminated with a listed waste that is treated by an immobilization technology specified in Table 1 is a hazardous waste and shall be managed in a hazardous waste facility.

(d) Treatment residuals

(1) General requirements. Except as provided by Subsections R315-268-45(d)(2) and (d)(4):

(i) Residue from the treatment of hazardous debris shall be separated from the treated debris using simple physical or mechanical means; and

(ii) Residue from the treatment of hazardous debris is subject to the waste-specific treatment standards provided by Sections R315-268-40 through 49 for the waste contaminating the debris.

(2) Nontoxic debris. Residue from the deactivation of ignitable, corrosive, or reactive characteristic hazardous debris, other than cyanide-reactive, that is not contaminated with a

contaminant subject to treatment defined by Subsection R315-268-45(b), shall be deactivated prior to land disposal and is not subject to the waste-specific treatment standards of Sections R315-268-40 through 49.

(3) Cyanide-reactive debris. Residue from the treatment of debris that is reactive because of cyanide shall meet the treatment standards for D003 in "Treatment Standards for Hazardous Wastes" at Section R315-268-40.

(4) Ignitable nonwastewater residue. Ignitable nonwastewater residue containing equal to or greater than 10% total organic carbon is subject to the technology specified in the treatment standard for D001: Ignitable Liquids.

(5) Residue from spalling. Layers of debris removed by spalling are hazardous debris that remain subject to the treatment standards of Section R315-268-45.

Table 1-Alternative Treatment Standards For Hazardous Debris, including footnotes found in 40 CFR 268.45, 2015 edition, is adopted and incorporated by reference.

R315-268-46. Land Disposal Restrictions -- Alternative Treatment Standards Based on HTMR.

For the treatment standards previously found in Section R315-268-46, refer to Section R315-268-40.

R315-268-48. Land Disposal Restrictions -- Universal Treatment Standards.

(a) Table UTS identifies the hazardous constituents, along with the nonwastewater and wastewater treatment standard levels, that are used to regulate most prohibited hazardous wastes with numerical limits. For determining compliance with treatment standards for underlying hazardous constituents as defined in Subsection R315-268-2(i), these treatment standards may not be exceeded. Compliance with these treatment standards is measured by an analysis of grab samples, unless otherwise noted in the following Table UTS.

Table Universal Treatment Standards (UTS)			
Regulated constituent common name	CAS ¹ number	Wastewater standard Concentra- tion ² in mg/l	Nonwastewater standard Concentra- tion ³ in mg/kg unless noted as "mg/l TCLP"
Organic Constituents			
Acenaphthylene	208-96-8	0.059	3.4
Acenaphthene	83-32-9	0.059	3.4
Acetone	67-64-1	0.28	160
Acetonitrile	75-05-8	5.6	38
Acetophenone	96-86-2	0.010	9.72-
Acetylaminofluorene	53-96-3	0.059	140
Acrolein	107-02-8	0.29	NA
Acrylamide	79-06-1	19	23
Acrylonitrile	107-13-1	0.24	84
Aldrin	309-00-2	0.021	0.066
4-Aminobiphenyl	92-67-1	0.13	NA
Aniline	62-53-3	0.81	14
o-Anisidine (2-methoxyaniline)	90-04-0	0.010	0.66
Anthracene	120-12-7	0.059	3.4
Aramite	140-57-8	0.36	NA
alpha-BHC	319-84-6	0.00014	0.066
beta-BHC	319-85-7	0.00014	0.066
delta-BHC	319-86-8	0.023	0.066
gamma-BHC	58-89-9	0.0017	0.066
Benzene	71-43-2	0.14	10
Benz(a)anthracene	56-55-3	0.059	3.4
Benzal chloride	98-87-3	0.055	6.0
Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)	205-99-2	0.11	6.8
Benzo(k)fluoranthene (difficult to	207-08-9	0.11	6.8

Note: NA means not applicable

distinguish from benzo(b)fluoranthene)			
Benzo(g,h,i)perylene	191-24-2	0.0055	1.8
Benzo(a)pyrene	50-32-8	0.061	3.4
Bromodichloromethane	75-27-4	0.35	15
Bromomethane/Methyl bromide	74-83-9	0.11	15
4-Bromophenyl phenyl ether	101-55-3	0.055	15
n-Butyl alcohol	71-36-3	5.6	2.6
Butyl benzyl phthalate	85-68-7	0.017	28
2-sec-Butyl-4,6- dinitrophenol/Dinoseb	88-85-7	0.066	2.5
Carbon disulfide	75-15-0	3.8	4.8 mg/l TCLP 6.0
Carbon tetrachloride	56-23-5	0.057	6.0
Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
p-Chloroaniline	106-47-8	0.46	16
Chlorobenzene	108-90-7	0.057	6.0
Chlorobenzilate	510-15-6	0.10	NA
2-Chloro-1,3-butadiene	126-99-8	0.057	0.28
Chlorodibromomethane	124-48-1	0.057	15
Chloroethane	75-00-3	0.27	6.0
bis(2-Chloroethoxy) methane	111-91-1	0.036	7.2
bis(2-Chloroethyl)ether	111-44-4	0.033	6.0
Chloroform	67-66-3	0.046	6.0
bis(2-Chloroisopropyl) ether	39638-32-9	0.055	7.2
p-Chloro-m-cresol	59-50-7	0.018	14
2-Chloroethyl vinyl ether	110-75-8	0.062	NA
Chloromethane/Methyl chloride	74-87-3	0.19	30
2-Chloronaphthalene	91-58-7	0.055	5.6
2-Chlorophenol	95-57-8	0.044	5.7
3-Chloropropylene	107-05-1	0.036	30
Chrysene	218-01-9	0.059	3.4
p-Cresidine	120-71-8	0.010	0.66
o-Cresol	95-48-7	0.11	5.6
m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77	5.6
p-Cresol (difficult to distinguish from m-cresol)	106-44-5	0.77	5.6
Cyclohexanone	108-94-1	0.36	0.75 mg/l TCLP 0.087
o,p'-DDD	53-19-0	0.023	0.087
p,p'-DDD	72-54-8	0.023	0.087
o,p'-DDE	3424-82-6	0.031	0.087
p,p'-DDE	72-55-9	0.031	0.087
o,p'-DDT	789-02-6	0.0039	0.087p,p'-DDT
	50-29-3	0.0039	0.087
Dibenz(a,h)anthracene	53-70-3	0.055	8.2
Dibenz(a,e)pyrene	192-65-4	0.061	NA
1,2-Dibromo-3- chloropropane	96-12-8	0.11	15
1,2-Dibromoethane/ Ethylene dibromide	106-93-4	0.028	15
Dibromomethane	74-95-3	0.11	15
m-Dichlorobenzene	541-73-1	0.036	6.0
o-Dichlorobenzene	95-50-1	0.088	6.0
p-Dichlorobenzene	106-46-7	0.090	6.0
Dichlorodifluoromethane	75-71-8	0.23	7.2
1,1-Dichloroethane	75-34-3	0.059	6.0
1,2-Dichloroethane	107-06-2	0.21	6.0
1,1-Dichloroethylene	75-35-4	0.025	6.0
trans-1,2- Dichloroethylene	156-60-5	0.054	30
2,4-Dichlorophenol	120-83-2	0.044	14
2,6-Dichlorophenol	87-65-0	0.044	14
2,4- Dichlorophenoxyacetic acid/2,4-D	94-75-7	0.72	10
1,2-Dichloropropane	78-87-5	0.85	18
cis-1,3- Dichloropropylene	10061-01-5	0.036	18
trans-1,3- Dichloropropylene	10061-02-6	0.036	18
Dieldrin	60-57-1	0.017	0.13
Diethyl phthalate	84-66-2	0.20	28
p-Dimethylaminoazobenzene	60-11-7	0.13	NA
2,4-Dimethylaniline (2,4-xylydine)	95-68-1	0.010	0.66
2,4-Dimethyl phenol	105-67-9	0.036	14
Dimethyl phthalate	131-11-3	0.047	28
Di-n-butyl phthalate	84-74-2	0.057	28

1,4-Dinitrobenzene	100-25-4	0.32	2.3	butylamine			
4,6-Dinitro-o-cresol	534-52-1	0.28	160	N-	10595-95-6	0.40	2.3
2,4-Dinitrophenol	51-28-5	0.12	160	Nitrosomethylethylamine			
2,4-Dinitrotoluene	121-14-2	0.32	140	N-Nitrosomorpholine	59-89-2	0.40	2.3
2,6-Dinitrotoluene	606-20-2	0.55	28	N-Nitrosopiperidine	100-75-4	0.013	35
Di-n-octyl phthalate	117-84-0	0.017	28	N-Nitrosopyrrolidine	930-55-2	0.013	35
Di-n-propyl nitrosamine	621-64-7	0.40	14	1,2,3,4,6,7,8,9-	3268-87-9	0.000063	0.005
1,4-Dioxane	123-91-1	12.0	170	Octachlorodibenzo-p-dioxin (OCDD)			
Diphenylamine	122-39-4	0.92	13	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	0.000063	0.005
(difficult to distinguish from diphenyl nitrosamine)				Parathion	56-38-2	0.014	4.6
Diphenyl nitrosamine	86-30-6	0.92	13	Total PCBs (sum of all PCB isomers, or all Aroclors) ⁵	1336-36-3	0.10	10
(difficult to distinguish from diphenylamine)				Pentachlorobenzene	608-93-5	0.055	10
1,2-Diphenylhydrazine	122-66-7	0.087	NA	PeCDDs (All)	NA	0.000063	0.001
Disulfoton	298-04-4	0.017	6.2	Pentachlorodibenzo-p-dioxins)			
Endosulfan I	959-98-8	0.023	0.066	PeCDFs (All)	NA	0.000035	0.001
Endosulfan II	33213-65-9	0.029	0.13	Pentachlorodibenzofurans)			
Endosulfan sulfate	1031-07-8	0.029	0.13	Pentachloroethane	76-01-7	0.055	6.0
Endrin	72-20-8	0.0028	0.13	Pentachloronitrobenzene	82-68-8	0.055	4.8
Endrin aldehyde	7421-93-4	0.025	0.13	Pentachlorophenol	87-86-5	0.089	7.4
Ethyl acetate	141-78-6	0.34	33	Phenacetin	62-44-2	0.081	16
Ethyl benzene	100-41-4	0.057	10	Phenanthrene	85-01-8	0.059	5.6
Ethyl cyanide/Propanenitrile	107-12-0	0.24	360	Phenol	108-95-2	0.039	6.2
Ethyl ether	60-29-7	0.12	160	1,3-Phenylenediamine	108-45-2	0.010	0.66
bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28	Phorate	298-02-2	0.021	4.6
Ethyl methacrylate	97-63-2	0.14	160	Phthalic acid	100-21-0	0.055	28
Ethylene oxide	75-21-8	0.12	NA	Phthalic anhydride	85-44-9	0.055	28Pronamide
Famphur	52-85-7	0.017	15	23950-58-5	0.093	1.5	
Fluoranthene	206-44-0	0.068	3.4	Pyrene	129-00-0	0.067	8.2
Fluorene	86-73-7	0.059	3.4	Pyridine	110-86-1	0.014	16
Heptachlor	76-44-8	0.0012	0.066	Safrole	94-59-7	0.081	22
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD)	35822-46-9	0.000035	.0025	Silvex/2,4,5-TP	93-72-1	0.72	7.9
1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)	67562-39-4	0.000035	.0025	1,2,4,5-Tetrachlorobenzene TCDDs (All)	95-94-3	0.055	14
1,2,3,4,6,7,8,9-Heptachlorodibenzofuran (1,2,3,4,6,7,8,9-HpCDF)	55673-89-7	0.000035	.0025	Tetrachlorodibenzo-p-dioxins)			
Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF)				TCDFs (All)	NA	0.000063	0.001
Heptachlor epoxide	1024-57-3	0.016	0.066	Tetrachlorodibenzofurans)			
Hexachlorobenzene	118-74-1	0.055	10	1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
Hexachlorobutadiene	87-68-3	0.055	5.6	1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0
Hexachlorocyclopentadiene	77-47-4	0.057	2.4	Tetrachloroethylene	127-18-4	0.056	6.0
HxCDDs (All)	NA	0.000063	0.001	2,3,4,6-Tetrachlorophenol	58-90-2	0.030	7.4
Hexachlorodibenzo-p-dioxins)				Toluene	108-88-3	0.080	10
HxCDFs (All)	NA	0.000063	0.001	Toxaphene	8001-35-2	0.0095	2.6
Hexachlorodibenzofurans)				Tribromomethane/Bromoform	75-25-2	0.063	15
Hexachloroethane	67-72-1	0.055	30	1,2,4-Trichlorobenzene	120-82-1	0.055	19
Hexachloropropylene	1888-71-7	0.035	30	1,1,1-Trichloroethane	71-55-6	0.054	6.0
Indeno(1,2,3-c,d)pyrene	193-39-5	0.0055	3.4	1,1,2-Trichloroethane	79-00-5	0.054	6.0
Iodomethane	74-88-4	0.19	65	Trichloroethylene	79-01-6	0.054	6.0
Isobutyl alcohol	78-83-1	5.6	170	Trichlorofluoromethane	75-69-4	0.020	30
Isodrin	465-73-6	0.021	0.066	2,4,5-Trichlorophenol	95-95-4	0.18	7.4
Isosafrole	120-58-1	0.081	2.6	2,4,6-Trichlorophenol	88-06-2	0.035	7.4
Kepone	143-50-0	0.0011	0.13	2,4,5-Trichlorophenoxyacetic acid/2,4,5-T	93-76-5	0.72	7.9
Methacrylonitrile	126-98-7	0.24	84	1,2,3-Trichloropropane	96-18-4	0.85	30
Methanol	67-56-1	5.6	.75 mg/l	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.057	30
Methapyrilene	91-80-5	0.081	1.5	tris-(2,3-Dibromopropyl) phosphate	126-72-7	0.11	0.10
Methoxychlor	72-43-5	0.25	0.18	Vinyl chloride	75-01-4	0.27	6.0
3-Methylcholanthrene	56-49-5	0.0055	15	Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
4,4-Methylene bis(2-chloroaniline)	101-14-4	0.50	30	Inorganic Constituents			
Methylene chloride	75-09-2	0.089	30	Antimony	7440-36-0	1.9	1.15 mg/l
Methyl ethyl ketone	78-93-3	0.28	36				TCLP
Methyl isobutyl ketone	108-10-1	0.14	33	Arsenic	7440-38-2	1.4	5.0 mg/l
Methyl methacrylate	80-62-6	0.14	160	Barium	7440-39-3	1.2	21 mg/l
Methyl methanesulfonate	66-27-3	0.018	NA	Beryllium	7440-41-7	0.82	TCLP
Methyl parathion	298-00-0	0.014	4.6				1.22 mg/l
Naphthalene	91-20-3	0.059	5.6	Cadmium	7440-43-9	0.69	TCLP
2-Naphthylamine	91-59-8	0.52	NA	Chromium (Total)	7440-47-3	2.77	0.60 mg/l
o-Nitroaniline	88-74-4	0.27	14				TCLP
p-Nitroaniline	100-01-6	0.028	28	Cyanides (Total) ⁴	57-12-5	1.2	590
Nitrobenzene	98-95-3	0.068	14				
5-Nitro-o-toluidine	99-55-8	0.32	28				
o-Nitrophenol	88-75-5	0.028	13				
p-Nitrophenol	100-02-7	0.12	29				
N-Nitrosodiethylamine	55-18-5	0.40	28				
N-Nitrosodimethylamine	62-75-9	0.40	2.3				
N-Nitroso-di-n-	924-16-3	0.40	17				

Constituent	Code	Level	Standard	Applicability	Notes
Cyanides (Amenable) ⁴	57-12-5	0.86	30	waste when it contaminated the soil*	
Fluoride ⁵	16984-48-8	35	NA	now	waste when the soil is first generated
Lead	7439-92-1	0.69	0.75 mg/l TCLP		with LDRs.
Mercury---Nonwastewater	7439-97-6	NA	0.20 mg/l TCLP	Didn't apply to the listed waste when it contaminated the soil*	Apply to the listed waste now
from Retort					The soil is determined not to contain the listed waste when the soil is first generated
Mercury-All Others	7439-97-6	0.15	0.025 mg/l TCLP		Need not comply with LDRs.
Nickel	7440-02-0	3.98	11 mg/l TCLP	Didn't apply to the listed waste when it contaminated the soil*	Don't apply to the listed waste now
Selenium ⁷	7782-49-2	0.82	5.7 mg/l TCLP		Need not comply with LDRs.
Silver	7440-22-4	0.43	0.14 mg/l TCLP		
Sulfide ⁵	18496-25-8	14	NA		
Thallium	7440-28-0	1.4	0.20 mg/l TCLP		
Vanadium ⁵	7440-62-2	4.3	1.6 mg/l TCLP		
Zinc ⁵	7440-66-6	2.61	4.3 mg/l TCLP		

*For dates of LDR applicability, see Rule R315-268 Appendix VII. To determine the date any given listed hazardous waste contaminated any given volume of soil, use the last date any given listed hazardous waste was placed into any given land disposal unit or, in the case of an accidental spill, the date of the spill.

Footnotes to Table UTS

- CAS means Chemical Abstract Services. When the waste code and/or regulated constituents are described as a combination of a chemical with its salts and/or esters, the CAS number is given for the parent compound only.
- Concentration standards for wastewaters are expressed in mg/l and are based on analysis of composite samples.
- Except for Metals (EP or TCLP) and Cyanides (Total and Amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of Sections R315-264-340 through 351 or 40 CFR 265.340 through 352, which are adopted by reference, or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to provisions in Subsection R315-268-40(d).
All concentration standards for nonwastewaters are based on analysis of grab samples.
- Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using Method 9010C or 9012B, found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section R315-260-11, with a sample size of 10 grams and a distillation time of one hour and 15 minutes.
- These constituents are not "underlying hazardous constituents" in characteristic wastes, according to the definition at Subsection R315-268-2(i).
- Reserved
- This constituent is not an underlying hazardous constituent as defined at Subsection R315-268-2(i) because its UTS level is greater than its TC level, thus a treatment selenium waste would always be characteristically hazardous, unless it is treated to below its characteristic level.
- This standard is temporarily deferred for soil exhibiting a hazardous characteristic due to D004-D011 only.

R315-268-49. Land Disposal Restrictions -- Alternative LDR Treatment Standards for Contaminated Soil.

(a) Applicability. You shall comply with LDRs prior to placing soil that exhibits a characteristic of hazardous waste, or exhibited a characteristic of hazardous waste at the time it was generated, into a land disposal unit. The following chart describes whether you shall comply with LDRs prior to placing soil contaminated by listed hazardous waste into a land disposal unit:

Table			
If LDRs	And if LDRs	And if	Then you
Applied to the listed waste when it contaminated the soil*	Apply to the listed waste now		Shall comply with LDRs.
Didn't apply to the listed	Apply to the listed waste	The soil is determined to contain the listed	Shall comply

(b) Prior to land disposal, contaminated soil identified by Subsection R315-268-49(a) as needing to comply with LDRs shall be treated according to the applicable treatment standards specified in Subsection R315-268-49(c) or according to the Universal Treatment Standards specified in Section R315-268-48 applicable to the contaminating listed hazardous waste and/or the applicable characteristic of hazardous waste if the soil is characteristic. The treatment standards specified in Subsection R315-268-49(c) and the Universal Treatment Standards may be modified through a treatment variance approved in accordance with Section R315-268-44.

(c) Treatment standards for contaminated soils. Prior to land disposal, contaminated soil identified by Subsection R315-268-49(a) as needing to comply with LDRs shall be treated according to all the standards specified in Subsection R315-268-49(c) or according to the Universal Treatment Standards specified in Section R315-268-48.

(1) All soils. Prior to land disposal, all constituents subject to treatment shall be treated as follows:

(A) For non-metals except carbon disulfide, cyclohexanone, and methanol, treatment shall achieve 90 percent reduction in total constituent concentrations, except as provided by Subsection R315-268-49(c)(1)(C).

(B) For metals and carbon disulfide, cyclohexanone, and methanol, treatment shall achieve 90 percent reduction in constituent concentrations as measured in leachate from the treated media, tested according to the TCLP, or 90 percent reduction in total constituent concentrations, when a metal removal treatment technology is used, except as provided by Subsection R315-268-49(c)(1)(C).

(C) When treatment of any constituent subject to treatment to a 90 percent reduction standard would result in a concentration less than 10 times the Universal Treatment Standard for that constituent, treatment to achieve constituent concentrations less than 10 times the universal treatment standard is not required. Universal Treatment Standards are identified in Section R315-268-48 Table UTS.

(2) Soils that exhibit the characteristic of ignitability, corrosivity or reactivity. In addition to the treatment required by Subsection R315-268-49(c)(1), prior to land disposal, soils that exhibit the characteristic of ignitability, corrosivity, or reactivity shall be treated to eliminate these characteristics.

(3) Soils that contain nonanalyzable constituents. In addition to the treatment requirements of Subsections R315-268-49(c)(1) and (2), prior to land disposal, the following treatment is required for soils that contain nonanalyzable constituents:

(A) For soil that contains only analyzable and nonanalyzable organic constituents, treatment of the analyzable organic constituents to the levels specified in Subsections R315-268-49(c)(1) and (2); or,

(B) For soil that contains only nonanalyzable constituents, treatment by the method(s) specified in Section R315-268-42 for the waste contained in the soil.

(d) Constituents subject to treatment. When applying the soil treatment standards in Subsection R315-268-49(c), constituents subject to treatment are any constituents listed in Section R315-268-48 Table UTS-Universal Treatment Standards that are reasonably expected to be present in any given volume of contaminated soil, except fluoride, selenium, sulfides, vanadium, zinc, and that are present at concentrations greater than ten times the universal treatment standard. PCBs are not constituent subject to treatment in any given volume of soil which exhibits the toxicity characteristic solely because of the presence of metals.

(e) Management of treatment residuals. Treatment residuals from treating contaminated soil identified by Subsection R315-268-49(a) as needing to comply with LDRs shall be managed as follows:

(1) Soil residuals are subject to the treatment standards of Section R315-268-49;

(2) Non-soil residuals are subject to:

(A) For soils contaminated by listed hazardous waste, the hazardous waste standards applicable to the listed hazardous waste; and

(B) For soils that exhibit a characteristic of hazardous waste, if the non-soil residual also exhibits a characteristic of hazardous waste, the treatment standards applicable to the characteristic hazardous waste.

R315-268-50. Land Disposal Restrictions -- Prohibitions on Storage of Restricted Wastes.

(a) Except as provided in Section R315-268-50, the storage of hazardous wastes restricted from land disposal under Sections R315-268-20 through 39 is prohibited, unless the following conditions are met:

(1) A generator stores such wastes in tanks, containers, or containment buildings on-site solely for the purpose of the accumulation of such quantities of hazardous waste as necessary to facilitate proper recovery, treatment, or disposal and the generator complies with the requirements in Section R315-262-34 and Rules R315-264 and 265.

(2) An owner/operator of a hazardous waste treatment, storage, or disposal facility stores such wastes in tanks, containers, or containment buildings solely for the purpose of the accumulation of such quantities of hazardous waste as necessary to facilitate proper recovery, treatment, or disposal and:

(i) Each container is clearly marked to identify its contents and the date each period of accumulation begins;

(ii) Each tank is clearly marked with a description of its contents, the quantity of each hazardous waste received, and the date each period of accumulation begins, or such information for each tank is recorded and maintained in the operating record at that facility. Regardless of whether the tank itself is marked, an owner/operator shall comply with the operating record requirements specified in Section R315-264-73 or 40 CFR 265.73, which are adopted by reference.

(3) A transporter stores manifested shipments of such wastes at a transfer facility for 10 days or less.

(b) An owner/operator of a treatment, storage or disposal facility may store such wastes for up to one year unless the Director can demonstrate that such storage was not solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment, or disposal.

(c) An owner/operator of a treatment, storage or disposal facility may store such wastes beyond one year; however, the owner/operator bears the burden of proving that such storage was solely for the purpose of accumulation of such quantities of

hazardous waste as are necessary to facilitate proper recovery, treatment, or disposal.

(d) If a generator's waste is exempt from a prohibition on the type of land disposal utilized for the waste, for example, because of an approved case-by-case extension under Section R315-268-5, an approved Section R315-268-6 petition, or a national capacity variance under Sections R315-268-20 through 39, the prohibition in Subsection R315-268-50(a) does not apply during the period of such exemption.

(e) The prohibition in Subsection R315-268-50(a) does not apply to hazardous wastes that meet the treatment standards specified under Sections R315-268-41, 42, and 43 or the treatment standards specified under the variance in Section R315-268-44, or, where treatment standards have not been specified, is in compliance with the applicable prohibitions specified in Section R315-268-32 or RCRA section 3004.

(f) Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 50 ppm shall be stored at a facility that meets the requirements of 40 CFR 761.65(b) and shall be removed from storage and treated or disposed as required by Rule R315-268 within one year of the date when such wastes are first placed into storage. The provisions of Subsection R315-268-50(c) do not apply to such PCB wastes prohibited under Section R315-268-32.

(g) The prohibition and requirements in Section R315-268-50 do not apply to hazardous remediation wastes stored in a staging pile approved pursuant to Section R315-264-554.

R315-268-51. Appendix III to Rule R315-268 - List of Halogenated Organic Compounds Regulated Under Section R315-268-32.

In determining the concentration of HOCs in a hazardous waste for purposes of the Section R315-268-32 land disposal prohibition, the Director has defined the HOCs that shall be included in a calculation as any compounds having a carbon-halogen bond which are listed in this Appendix, see Section R315-268-2. Appendix III to Rule R315-268 consists of the following compounds:

- I. Volatiles
 1. Bromodichloromethane
 2. Bromomethane
 3. Carbon Tetrachloride
 4. Chlorobenzene
 5. 2-Chloro-1,3-butadiene
 6. Chlorodibromomethane
 7. Chloroethane
 8. 2-Chloroethyl vinyl ether
 9. Chloroform
 10. Chloromethane
 11. 3-Chloropropene
 12. 1,2-Dibromo-3-chloropropane
 13. 1,2-Dibromomethane
 14. Dibromomethane
 15. Trans-1,4-Dichloro-2---butene
 16. Dichlorodifluoromethane
 17. 1,1-Dichloroethane
 18. 1,2-Dichloroethane
 19. 1,1-Dichloroethylene
 20. Trans-1,2-Dichloroethene
 21. 1,2-Dichloropropane
 22. Trans-1,3-Dichloropropene
 23. cis-1,3-Dichloropropene
 24. Iodomethane
 25. Methylene chloride
 26. 1,1,1,2-Tetrachloroethane
 27. 1,1,2,2-Tetrachloroethane
 28. Tetrachloroethene
 29. Tribromomethane
 30. 1,1,1-Trichloroethane

31. 1,1,2-Trichloroethane
32. Trichloroethene
33. Trichloromonofluoromethane
34. 1,2,3-Trichloropropane
35. Vinyl Chloride
- II. Semivolatiles
 1. Bis(2-chloroethoxy)ethane
 2. Bis(2-chloroethyl)ether
 3. Bis(2-chloroisopropyl)ether
 4. p-Chloroaniline
 5. Chlorobenzilate
 6. p-Chloro-m-cresol
 7. 2-Chloronaphthalene
 8. 2-Chlorophenol
 9. 3-Chloropropionitrile
 10. m-Dichlorobenzene
 11. o-Dichlorobenzene
 12. p-Dichlorobenzene
 13. 3,3'-Dichlorobenzidine
 14. 2,4-Dichlorophenol
 15. 2,6-Dichlorophenol
 16. Hexachlorobenzene
 17. Hexachlorobutadiene
 18. Hexachlorocyclopentadiene
 19. Hexachloroethane
 20. Hexachloropropene
 21. Hexachloropropene
 22. 4,4'-Methylenebis(2-chloroaniline)
 23. Pentachlorobenzene
 24. Pentachloroethane
 25. Pentachloronitrobenzene
 26. Pentachlorophenol
 27. Pronamide
 28. 1,2,4,5-Tetrachlorobenzene
 29. 2,3,4,6-Tetrachlorophenol
 30. 1,2,4-Trichlorobenzene
 31. 2,4,5-Trichlorophenol
 32. 2,4,6-Trichlorophenol
 33. Tris(2,3-dibromopropyl)phosphate
- III. Organochlorine Pesticides
 1. Aldrin
 2. alpha-BHC
 3. beta-BHC
 4. delta-BHC
 5. gamma-BHC
 6. Chlorodane
 7. DDD
 8. DDE
 9. DDT
 10. Dieldrin
 11. Endosulfan I
 12. Endosulfan II
 13. Endrin
 14. Endrin aldehyde
 15. Heptachlor
 16. Heptachlor epoxide
 17. Isodrin
 18. Kepone
 19. Methoxychlor
 20. Toxaphene
- IV. Phenoxyacetic Acid Herbicides
 1. 2,4-Dichlorophenoxyacetic acid
 2. Silvex
 3. 2,4,5-T
- V. PCBs
 1. Aroclor 1016
 2. Aroclor 1221
 3. Aroclor 1232
 4. Aroclor 1242

5. Aroclor 1248
6. Aroclor 1254
7. Aroclor 1260
8. PCBs not otherwise specified
- VI. Dioxins and Furans
 1. Hexachlorodibenzo-p-dioxins
 2. Hexachlorodibenzofuran
 3. Pentachlorodibenzo-p-dioxins
 4. Pentachlorodibenzofuran
 5. Tetrachlorodibenzo-p-dioxins
 6. Tetrachlorodibenzofuran
 7. 2,3,7,8-Tetrachlorodibenzo-p-dioxin

R315-268-52. Appendix IV to Rule R315-268 - Wastes Excluded from Lab Packs Under the Alternative Treatment Standards of Subsection R315-268-42(c).

Hazardous waste with the following EPA Hazardous Waste Codes may not be placed in lab packs under the alternative lab pack treatment standards of Subsection R315-268-42(c): D009, F019, K003, K004, K005, K006, K062, K071, K100, K106, P010, P011, P012, P076, P078, U134, U151.

R315-268-53. Appendix VI to Rule R315-268 - Recommended Technologies to Achieve Deactivation of Characteristics in Section R315-268-42.

The treatment standard for many characteristic wastes is stated in the Section R315-268-40 Table of Treatment Standards as "Deactivation and meet UTS." The Director has determined that many technologies, when used alone or in combination, can achieve the deactivation portion of the treatment standard. Characteristic wastes that are not managed in a facility regulated by the Clean Water Act (CWA) or in a CWA-equivalent facility, and that also contain underlying hazardous constituents, see Subsection R315-268-2(i), shall be treated not only by a "deactivating" technology to remove the characteristic, but also to achieve the universal treatment standards (UTS) for underlying hazardous constituents. The following appendix presents a partial list of technologies, utilizing the five letter technology codes established in Section R315-268-42 Table 1, that may be useful in meeting the treatment standard. Use of these specific technologies is not mandatory and does not preclude direct reuse, recovery, and/or the use of other pretreatment technologies, provided deactivation is achieved and underlying hazardous constituents are treated to achieve the UTS.

Table

Waste code/subcategory	Nonwastewaters	Wastewaters
D001 Ignitable Liquids based on R315-261-21(a)(1)-Low TOC Nonwastewater Subcategory, containing 1% to <10% TOC	RORGs INCIN WETOX CHOXD BIODG	n.a.
D001 Ignitable Liquids based on Subsection R315-261-21(a)(1) -Ignitable Wastewater Subcategory, containing <1% TOC	n.a.	RORGs INCIN WETOX CHOXD BIODG
D001 Compressed Gases based on Subsection R315-261-21(A)(3)	RCGAS INCIN FSUBS ADGAS fb. ADGAS fb. (CHOXD; or CHRED)	n.a.
D001 Ignitable Reactives based on Subsection R315-261-21(a)(2)	WTRRX CHOXD CHRED STABL INCIN CHRED INCIN	n.a.
D001 Ignitable Oxidizers based on Subsection R315-261-21(a)(4)	CHRED INCIN	CHRED INCIN

D002 Acid Subcategory based on Subsection R315-261-22(a)(1) with pH less than or equal to 2	RCORR NEUTR INCIN	NEUTR INCIN	D006 D006 D007	Newly identified D006 and mineral processing wastes Mixed radioactive/newly identified D006 or mineral processing wastes Newly identified D007 and mineral processing wastes	Aug. 24, 1998. May 26, 2000. Aug. 24, 1998.
D002 Alkaline Subcategory based on Subsection R315-261-22(a)(1) with pH greater than or equal to 12.5	NEUTR INCIN	NEUTR INCIN	D007 D008 D008 D009	Mixed radioactive/newly identified D007 or mineral processing wastes Newly identified D008 and mineral processing waste Mixed radioactive/newly identified D008 or mineral processing wastes, Newly identified D009 and mineral processing waste	May 26, 2000. Aug. 24, 1998. May 26, 2000. Aug. 24, 1998.
D002 Other Corrosives based on Subsection R315-261-22(a)(2)	CHOXD CHRED INCIN STABL	CHOXD CHRED INCIN	D009 D009 D010 D010	Mixed radioactive/newly identified D009 or mineral processing wastes Newly identified D010 and mineral processing wastes Mixed radioactive/newly identified D010 or mineral processing wastes	May 26, 2000. Aug. 24, 1998. May 26, 2000. Aug. 24, 1998.
D003 Water Reactives based on Subsections R315-268-23(a)(2), (3), and (4)	INCIN WTRRX CHOXD CHRED	n.a.	D011 D011	Newly identified D011 and mineral processing wastes Mixed radioactive/newly identified D011 or mineral processing wastes	Aug. 24, 1998. May 26, 2000.
D003 Reactive Sulfides based on Subsection R315-261-23(a)(5)	CHOXD CHRED INCIN STABL	CHOXD CHRED BIODG INCIN	D011 D012 (that exhibit the toxicity characteristic based on the TCLP) ^d	Mixed radioactive/newly identified D011 or mineral processing wastes All	May 26, 2000. Dec. 14, 1994
D003 Explosives based on Subsection R315-261-23(a)(6), (7), and (8)	INCIN CHOXD CHRED	INCIN CHOXD CHRED	D013 (that exhibit the toxicity characteristic based on the TCLP) ^d	All	Dec. 14, 1994
D003 Other Reactives based on Subsection R315-261-23(a)(1)	INCIN CHOXD CHRED	INCIN CHOXD CHRED BIODG CARBN	D014 (that exhibit the toxicity characteristic based on the TCLP) ^d	All	Dec. 14, 1994
K044 Wastewater treatment sludges from the manufacturing and processing of explosives	CHOXD CHRED INCIN	CHOXD CHRED BIODG CARBN INCIN	D015 (that exhibit the toxicity characteristic based on the TCLP) ^d	All	Dec. 14, 1994
K045 Spent carbon from the treatment of wastewaters containing explosives	CHOXD CHRED INCIN	CHOXD CHRED BIODG CARBN INCIN	D016 (that exhibit the toxicity characteristic based on the TCLP) ^d	All	Dec. 14, 1994
K047 Pink/red water from TNT operations	CHOXD CHRED INCIN	CHOXD CHRED BIODG CARBN INCIN	D017 (that exhibit the toxicity characteristic based on the TCLP) ^d	All	Dec. 14, 1994

Note: "n.a." stands for "not applicable"; "fb." stands for "followed by".

R315-268-54. Appendix VII to Rule R315-268 - LDR Effective Dates of Surface Disposed Prohibited Hazardous Wastes.

Waste Code	Waste category	Effective date	Waste Code	Waste category	Effective date
D001 ^c	All (except High TOC Ignitable Liquids)	Aug. 9, 1993.	D018	Mixed with radioactive wastes	Sept.19, 1996.
D001	High TOC Ignitable Liquids,	Aug. 8, 1990.	D018	All others	Dec. 19, 1994.
D002 ^c	All	Aug. 9, 1993.	D019	Mixed with radioactive wastes	Sept.19, 1996.
D003	Newly identified surface-disposed elemental phosphorus processing wastes.	May 26, 2000	D019	All others	Dec. 19, 1994.
D004	Newly identified D004 and mineral processing wastes	Aug. 24, 1998.	D020	Mixed with radioactive wastes	Sept.19, 1996.
D004	Mixed radioactive/newly identified D004 or mineral processing wastes	May 26, 2000	D020	All others	Dec. 19, 1994.
D005	Newly identified D005 and mineral processing wastes	Aug. 24, 1998.	D021	Mixed with radioactive wastes	Sept.19, 1996.
D005	Mixed radioactive/newly identified D005 or mineral processing wastes	May 26, 2000.	D021	All others	Dec. 19, 1994.
			D022	Mixed with radioactive wastes	Sept.19, 1996.
			D022	All others	Dec. 19, 1994.
			D023	Mixed with radioactive wastes	Sept.19, 1996.
			D023	All others	Dec. 19, 1994.
			D024	Mixed with radioactive wastes	Sept.19, 1996.
			D024	All others	Dec. 19, 1994.
			D025	Mixed with radioactive wastes	Sept.19,

D025	All others	1996. Dec. 19, 1994.	F002	All others	Nov. 8, 1986.
D026	Mixed with radioactive wastes	Sept.19, 1996.	F003	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids,	Nov. 8, 1988.
D026	All others	Dec. 19, 1994.	F003	All others	Nov. 8, 1986.
D027	Mixed with radioactive wastes	Sept.19, 1996.	F004	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids	Nov. 8, 1988.
D027	All others	Dec. 19, 1994.	F004	All others	Nov. 8, 1986.
D028	Mixed with radioactive wastes	Sept.19, 1996.	F005 (benzene, 2-ethoxy ethanol, 2-nitropropane)	Wastewater and Nonwastewater	Aug. 8, 1990.
D028	All others	Dec. 19, 1994.	F005	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids	Nov. 8, 1988.
D029	Mixed with radioactive wastes	Sept.19, 1996.	F005	All others	Nov. 8, 1986.
D029	All others	Dec. 19, 1994.	F006	Wastewater	Aug. 8, 1990.
D030	Mixed with radioactive wastes	Sept.19, 1996.	F006	Nonwastewater	Aug. 8, 1988.
D030	All others	Dec. 19, 1994.	F006	Nonwastewater (cyanides)	July 8, 1989.
D031	Mixed with radioactive wastes	Sept.19, 1996.	F007	All	July 8, 1989.
D031	All others	Dec. 19, 1994.	F008	All	July 8, 1989.
D032	Mixed with radioactive wastes	Sept.19, 1996.	F009	All	July 8, 1989.
D032	All others	Dec. 19, 1994.	F010	All	July 8, 1989.
D033	Mixed with radioactive wastes	Sept.19, 1996.	F011 (cyanides)	Nonwastewater	Dec. 8, 1989.
D033	All others	Dec. 19, 1994.	F011	All others	July 8, 1989.
D034	Mixed with radioactive wastes	Sept.19, 1996.	F012 (cyanides)	Nonwastewater	Dec. 8, 1989.
D034	All others	Dec. 19, 1994.	F012	All others	July 8, 1989.
D035	Mixed with radioactive wastes	Sept.19, 1996.	F019	All	Aug. 8, 1990.
D035	All others	Dec. 19, 1994.	F020	All	Aug. 8, 1988.
D036	Mixed with radioactive wastes	Sept.19, 1996.	F021	All	Aug. 8, 1988.
D036	All others	Dec. 19, 1994.	F025	All	Aug. 8, 1990.
D037	Mixed with radioactive wastes	Sept.19, 1996.	F026	All	Aug. 8, 1988.
D037	All others	Dec. 19, 1994.	F027	All	Aug. 8, 1988.
D038	Mixed with radioactive wastes	Sept.19, 1996.	F028	All	Aug. 8, 1988.
D038	All others	Dec. 19, 1994.	F032	Mixed with radioactive wastes	May 12, 1999
D039	Mixed with radioactive wastes	Sept.19, 1996.	F032	All others	Aug. 12, 1997.
D039	All others	Dec. 19, 1994.	F034	Mixed with radioactive wastes	May 12, 1999
D040	Mixed with radioactive wastes	Sept.19, 1996.	F034	All others	Aug. 12, 1997.
D040	All others	Dec. 19, 1994.	F035	Mixed with radioactive wastes	May 12, 1999.
D041	Mixed with radioactive wastes	Sept.19, 1996.	F035	All others	Aug. 12, 1997.
D041	All others	Dec. 19, 1994.	F037	Not generated from surface impoundment cleanouts or closures	June 30, 1993.
D042	Mixed with radioactive wastes	Sept.19, 1996.	F037	Generated from surface impoundment cleanouts or closures	June 30, 1994.
D042	All others	Dec. 19, 1994.	F037	Mixed with radioactive wastes	June 30, 1994.
D043	Mixed with radioactive wastes	Sept.19, 1996.	F038	Not generated from surface impoundment cleanouts or closures	June 30, 1993.
D043	All others	Dec. 19, 1994.	F038	Mixed with radioactive wastes	June 30, 1994.
F001	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	Nov. 8, 1988	F038	Mixed with radioactive wastes	June 30, 1994.
F001	All others	Nov. 8, 1986.	F039	Wastewater	Aug. 8,
F002 (1,1,2-trichloroethane)	Wastewater and Nonwastewater	Aug. 8, 1990.			
F002	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids	Nov. 8, 1988			

F039	Nonwastewater	1990. May 8, 1992.	K031	Wastewater	Aug. 8, 1990.
K001	All	Aug. 8, 1988.	K031	Nonwastewater	May 8, 1992.
K001 (organics) ^b	All others	Aug. 8, 1988.	K032	All	Aug. 8, 1990.
K002	All	Aug. 8, 1990.	K033	All	Aug. 8, 1990.
K003	All	Aug. 8, 1990.	K034	All	Aug. 8, 1990.
K004	Wastewater	Aug. 8, 1990.	K035	All	Aug. 8, 1990.
K004	Nonwastewater	Aug. 8, 1988.	K036	Wastewater	Aug. 8, 1990.
K005	Wastewater	Aug. 8, 1990.	K036	Nonwastewater	Aug. 8, 1988.
K005	Nonwastewater	June 8, 1989.	K037 ^b	Wastewater	Aug. 8, 1988.
K006	All	Aug. 8, 1990.	K037	Nonwastewater	Aug. 8, 1988.
K007	Wastewater	Aug. 8, 1990.	K038	All	June 8, 1989.
K007	Nonwastewater	June 8, 1989.	K039	All	June 8, 1989.
K008	Wastewater	Aug. 8, 1990.	K040	All	June 8, 1989.
K008	Nonwastewater	Aug. 8, 1988.	K041	All	Aug. 8, 1990.
K009	All	June 8, 1989.	K042	All	Aug. 8, 1990.
K010	All	June 8, 1989.	K043	All	June 8, 1989.
K011	Wastewater	Aug. 8, 1990.	K044	All	Aug. 8, 1988.
K011	Nonwastewater	June 8, 1989.	K045	All	Aug. 8, 1988.
K013	Wastewater	Aug. 8, 1990.	K046	Nonwastewater	Aug. 8, 1988.
K013	Nonwastewater	June 8, 1989.	(Nonreactive) K046	All others	Aug. 8, 1990.
K014	Wastewater	Aug. 8, 1990.	K047	All	Aug. 8, 1988.
K014	Nonwastewater	June 8, 1989.	K048	Wastewater	Aug. 8, 1990.
K015	Wastewater	Aug. 8, 1990.	K048	Nonwastewater	Nov. 8, 1990.
K015	Nonwastewater	Aug. 8, 1990.	K049	Wastewater	Aug. 8, 1990.
K016	All	Aug. 8, 1988.	K049	Nonwastewater	Nov. 8, 1990.
K017	All	Aug. 8, 1990.	K050	Wastewater	Aug. 8, 1990.
K018	All	Aug. 8, 1988.	K050	Nonwastewater	Nov. 8, 1990.
K019	All	Aug. 8, 1988.	K051	Wastewater	Aug. 8, 1990.
K020	All	Aug. 8, 1988.	K051	Nonwastewater	Nov. 8, 1990.
K021	Wastewater	Aug. 8, 1990.	K052	Wastewater	Aug. 8, 1990.
K021	Nonwastewater	Aug. 8, 1988.	K052	Nonwastewater	Nov. 8, 1990.
K022	Wastewater	Aug. 8, 1990.	K060	Wastewater	Aug. 8, 1990.
K022	Nonwastewater	Aug. 8, 1988.	K060	Nonwastewater	Aug. 8, 1988.
K023	All	June 8, 1989.	K061	Wastewater	Aug. 8, 1990.
K024	All	Aug. 8, 1988.	K061	Nonwastewater	June 30, 1992.
K025	Wastewater	Aug. 8, 1990.	K062	All	Aug. 8, 1988.
K025	Nonwastewater	Aug. 8, 1988.	K069 (Non- Calcium Sulfate)	Nonwastewater	Aug. 8, 1988.
K026	All	Aug. 8, 1990.	K069	All others	Aug. 8, 1990.
K027	All	June 8, 1989.	K071	All	Aug. 8, 1990.
K028 (metals)	Nonwastewater	Aug. 8, 1990.	K073	All	Aug. 8, 1990.
K028	All others	June 8, 1989.	K083	All	Aug. 8, 1990.
K029	Wastewater	Aug. 8, 1990.	K084	Wastewater	Aug. 8, 1990.
K029	Nonwastewater	June 8, 1989.	K084	Nonwastewater	May 8, 1992.
K030	All	Aug. 8, 1988.	K085	All	Aug. 8, 1990.

K086 (organics) ^b	All	Aug. 8, 1988.	K117	Mixed with radioactive wastes	1989. June 30,
K086	All others	Aug. 8, 1988.	K117	All others	1994. Nov. 9,
K087	All	Aug. 8, 1988.	K118	Mixed with radioactive wastes	1992. June 30,
K088	All others	Oct. 8, 1997.	K118	All others	1994. Nov. 9,
K088	All others	Jan. 8, 1997.	K123	Mixed with radioactive wastes	1992. June 30,
K093	All	June 8, 1989.	K123	All others	1994. Nov. 9,
K094	All	June 8, 1989.	K124	Mixed with radioactive wastes	1992. June 30,
K095	Wastewater	Aug. 8, 1990.	K124	All others	1994. Nov. 9,
K095	Nonwastewater	June 8, 1989.	K125	Mixed with radioactive wastes	1992. June 30,
K096	Wastewater	Aug. 8, 1990.	K125	All others	1994. Nov. 9,
K096	Nonwastewater	June 8, 1989.	K126	Mixed with radioactive wastes	1992. June 30,
K097	All	Aug. 8, 1990.	K126	All others	1994. Nov. 9,
K098	All	Aug. 8, 1990.	K131	Mixed with radioactive wastes	1992. June 30,
K099	All	Aug. 8, 1988.	K131	All others	1994. Nov. 9,
K100	Wastewater	Aug. 8, 1990.	K132	Mixed with radioactive wastes	1992. June 30,
K100	Nonwastewater	Aug. 8, 1988.	K132	All others	1994. Nov. 9,
K101 (organics)	Wastewater	Aug. 8, 1988.	K136	Mixed with radioactive wastes	1992. June 30,
K101 (metals)	Wastewater	Aug. 8, 1990.	K136	All others	1994. Nov. 9,
K101 (organics)	Nonwastewater	Aug. 8, 1988.	K141	Mixed with radioactive wastes	1992. Sep. 19,
K101 (metals)	Nonwastewater	May 8, 1992.	K141	All others	1996. Dec. 19,
K102 (organics)	Wastewater	Aug. 8, 1988.	K142	Mixed with radioactive wastes	1994. Sep. 19,
K102 (metals)	Wastewater	Aug. 8, 1990.	K142	All others	1996. Dec. 19,
K102 (organics)	Nonwastewater	Aug. 8, 1988.	K143	Mixed with radioactive wastes	1994. Sep. 19,
K102 (metals)	Nonwastewater	May 8, 1992.	K143	All others	1996. Dec. 19,
K103	All	Aug. 8, 1988.	K144	Mixed with radioactive wastes	1994. Sep. 19,
K104	All	Aug. 8, 1988.	K144	All others	1996. Dec. 19,
K105	All	Aug. 8, 1990.	K145	Mixed with radioactive wastes	1994. Sep. 19,
K106	Wastewater	Aug. 8, 1990.	K145	All others	1996. Dec. 19,
K106	Nonwastewater	May 8, 1992.	K147	Mixed with radioactive wastes	1994. Sep. 19,
K107	Mixed with radioactive wastes	June 30, 1994.	K147	All others	1996. Dec. 19,
K107	All others	Nov. 9, 1992.	K148	Mixed with radioactive wastes	1994. Sep. 19,
K108	Mixed with radioactive wastes	June 30, 1994.	K148	All others	1996. Dec. 19,
K108	All others	Nov. 9, 1992.	K149	Mixed with radioactive wastes	1994. Sep. 19,
K109	Mixed with radioactive wastes	June 30, 1994.	K149	All others	1996. Dec. 19,
K109	All others	Nov. 9, 1992.	K150	Mixed with radioactive wastes	1994. Sep. 19,
K110	Mixed with radioactive wastes	June 30, 1994.	K150	All others	1996. Dec. 19,
K110	All others	Nov. 9, 1992.	K151	Mixed with radioactive wastes	1994. Sep. 19,
K111	Mixed with radioactive wastes	June 30, 1994.	K151	All others	1996. Dec. 19,
K111	All others	Nov. 9, 1992.	K156	Mixed with radioactive wastes	1994. Apr. 8,
K112	Mixed with radioactive wastes	June 30, 1994.	K156	All others	1998. July 8,
K112	All others	Nov. 9, 1992.	K157	Mixed with radioactive wastes	1996. Apr. 8,
K113	All	June 8, 1989.	K157	All others	1998. July 8,
K114	All	June 8, 1989.	K158	Mixed with radioactive wastes	1996. Apr. 8,
K115	All	June 8, 1989.	K158	All others	1998. July 8,
K116	All	June 8,			1996.

K159	Mixed with radioactive wastes	Apr. 8, 1998.	P038	Nonwastewater	1990.
K159	All others	July 8, 1996.	P039	All	May 8, 1992.
K160	Mixed with radioactive wastes	Apr. 8, 1998.	P040	All	June 8, 1989.
K160	All others	July 8, 1996.	P041	All	June 8, 1989.
K161	Mixed with radioactive wastes	Apr. 8, 1998.	P042	All	June 8, 1989.
K161	All others	July 8, 1996.	P043	All	Aug. 8, 1990.
P001	All	Aug. 8, 1990.	P044	All	June 8, 1989.
P002	All	Aug. 8, 1990.	P045	All	June 8, 1989.
P003	All	Aug. 8, 1990.	P046	All	Aug. 8, 1990.
P004	All	Aug. 8, 1990.	P047	All	Aug. 8, 1990.
P005	All	Aug. 8, 1990.	P048	All	Aug. 8, 1990.
P006	All	Aug. 8, 1990.	P049	All	Aug. 8, 1990.
P007	All	Aug. 8, 1990.	P050	All	Aug. 8, 1990.
P008	All	Aug. 8, 1990.	P051	All	Aug. 8, 1990.
P009	All	Aug. 8, 1990.	P054	All	Aug. 8, 1990.
P010	Wastewater	Aug. 8, 1990.	P056	All	Aug. 8, 1990.
P010	Nonwastewater	May 8, 1992.	P057	All	Aug. 8, 1990.
P011	Wastewater	Aug. 8, 1990.	P058	All	Aug. 8, 1990.
P011	Nonwastewater	May 8, 1992.	P059	All	Aug. 8, 1990.
P012	Wastewater	Aug. 8, 1990.	P060	All	Aug. 8, 1990.
P012	Nonwastewater	May 8, 1992.	P062	All	Aug. 8, 1990.
P013 (barium)	Nonwastewater	Aug. 8, 1990.	P063	All	June 8, 1989.
P013	All others	June 8, 1989.	P064	All	June 8, 1989.
P014	All	Aug. 8, 1990.	P065	Wastewater	Aug. 8, 1990.
P015	All	Aug. 8, 1990.	P065	Nonwastewater	Aug. 8, 1990.
P016	All	Aug. 8, 1990.	P066	All	May 8, 1992.
P017	All	Aug. 8, 1990.	P067	All	Aug. 8, 1990.
P018	All	Aug. 8, 1990.	P067	All	Aug. 8, 1990.
P020	All	Aug. 8, 1990.	P068	All	Aug. 8, 1990.
P021	All	June 8, 1989.	P069	All	Aug. 8, 1990.
P022	All	Aug. 8, 1990.	P070	All	Aug. 8, 1990.
P023	All	Aug. 8, 1990.	P071	All	June 8, 1989.
P024	All	Aug. 8, 1990.	P072	All	Aug. 8, 1990.
P026	All	Aug. 8, 1990.	P073	All	Aug. 8, 1990.
P027	All	Aug. 8, 1990.	P074	All	Aug. 8, 1990.
P028	All	Aug. 8, 1990.	P075	All	June 8, 1989.
P029	All	June 8, 1989.	P076	All	Aug. 8, 1990.
P030	All	June 8, 1989.	P077	All	Aug. 8, 1990.
P031	All	Aug. 8, 1990.	P078	All	Aug. 8, 1990.
P033	All	Aug. 8, 1990.	P081	All	Aug. 8, 1990.
P034	All	Aug. 8, 1990.	P082	All	Aug. 8, 1990.
P036	Wastewater	Aug. 8, 1990.	P084	All	Aug. 8, 1990.
P036	Nonwastewater	May 8, 1992.	P085	All	Aug. 8, 1990.
P037	All	Aug. 8, 1990.	P087	All	June 8, 1989.
P038	Wastewater	Aug. 8,	P088	All	May 8, 1992.
					Aug. 8, 1990.

P089	All	June 8, 1989.	P191	Mixed with radioactive wastes	1996.
P092	Wastewater	Aug. 8, 1990.	P191	All others	Apr. 8, 1998.
P092	Nonwastewater	May 8, 1992.	P192	Mixed with radioactive wastes	July 8, 1996.
P093	All	Aug. 8, 1990.	P192	All others	Apr. 8, 1998.
P094	All	June 8, 1989.	P194	Mixed with radioactive wastes	July 8, 1996.
P095	All	Aug. 8, 1990.	P194	All others	Apr. 8, 1998.
P096	All	Aug. 8, 1990.	P196	Mixed with radioactive wastes	July 8, 1996.
P097	All	June 8, 1989.	P196	All others	Apr. 8, 1998.
P098	All	June 8, 1989.	P196	All others	July 8, 1996.
P099 (silver)	Wastewater	Aug. 8, 1990.	P197	Mixed with radioactive wastes	Apr. 8, 1998.
P099	All others	June 8, 1989.	P197	All others	July 8, 1996.
P101	All	Aug. 8, 1990.	P198	Mixed with radioactive wastes	Apr. 8, 1998.
P102	All	Aug. 8, 1990.	P198	All others	July 8, 1996.
P103	All	Aug. 8, 1990.	P199	Mixed with radioactive wastes	Apr. 8, 1998.
P104 (silver)	Wastewater	Aug. 8, 1990.	P199	All others	July 8, 1996.
P104	All others	June 8, 1989.	P201	Mixed with radioactive wastes	Apr. 8, 1998.
P105	All	Aug. 8, 1990.	P201	All others	July 8, 1996.
P106	All	June 8, 1989.	P202	Mixed with radioactive wastes	Apr. 8, 1998.
P108	All	Aug. 8, 1990.	P202	All others	July 8, 1996.
P109	All	June 8, 1989.	P203	Mixed with radioactive wastes	Apr. 8, 1998.
P110	All	Aug. 8, 1990.	P203	All others	July 8, 1996.
P111	All	June 8, 1989.	P204	Mixed with radioactive wastes	Apr. 8, 1998.
P112	All	Aug. 8, 1990.	P204	All others	July 8, 1996.
P113	All	Aug. 8, 1990.	P205	Mixed with radioactive wastes	Apr. 8, 1998.
P114	All	Aug. 8, 1990.	P205	All others	July 8, 1996.
P115	All	Aug. 8, 1990.	U001	All	Aug. 8, 1990.
P116	All	Aug. 8, 1990.	U002	All	Aug. 8, 1990.
P118	All	Aug. 8, 1990.	U003	All	Aug. 8, 1990.
P119	All	Aug. 8, 1990.	U004	All	Aug. 8, 1990.
P120	All	Aug. 8, 1990.	U005	All	Aug. 8, 1990.
P121	All	June 8, 1989.	U006	All	Aug. 8, 1990.
P122	All	Aug. 8, 1990.	U007	All	Aug. 8, 1990.
P123	All	Aug. 8, 1990.	U008	All	Aug. 8, 1990.
P127	Mixed with radioactive wastes	Apr. 8, 1998.	U009	All	Aug. 8, 1990.
P127	All others	July 8, 1996.	U010	All	Aug. 8, 1990.
P128	Mixed with radioactive wastes	Apr. 8, 1998.	U011	All	Aug. 8, 1990.
P128	All others	July 8, 1996.	U012	All	Aug. 8, 1990.
P185	Mixed with radioactive wastes	Apr. 8, 1998.	U014	All	Aug. 8, 1990.
P185	All others	July 8, 1996.	U015	All	Aug. 8, 1990.
P188	Mixed with radioactive wastes	Apr. 8, 1998.	U016	All	Aug. 8, 1990.
P188	All others	July 8, 1996.	U017	All	Aug. 8, 1990.
P189	Mixed with radioactive wastes	Apr. 8, 1998.	U018	All	Aug. 8, 1990.
P189	All others	July 8, 1996.	U019	All	Aug. 8, 1990.
P190	Mixed with radioactive wastes	Apr. 8, 1998.	U020	All	Aug. 8, 1990.
P190	All others	July 8, 1996.	U021	All	Aug. 8, 1990.

U022	A11	Aug. 8, 1990.	U070	A11	1992. Aug. 8,
U023	A11	Aug. 8, 1990.	U071	A11	1990. Aug. 8,
U024	A11	Aug. 8, 1990.	U072	A11	1990. Aug. 8,
U025	A11	Aug. 8, 1990.	U073	A11	1990. Aug. 8,
U026	A11	Aug. 8, 1990.	U074	A11	1990. Aug. 8,
U027	A11	Aug. 8, 1990.	U075	A11	1990. Aug. 8,
U028	A11	June 8, 1989.	U076	A11	1990. Aug. 8,
U029	A11	Aug. 8, 1990.	U077	A11	1990. Aug. 8,
U030	A11	Aug. 8, 1990.	U078	A11	1990. Aug. 8,
U031	A11	Aug. 8, 1990.	U079	A11	1990. Aug. 8,
U032	A11	Aug. 8, 1990.	U080	A11	1990. Aug. 8,
U033	A11	Aug. 8, 1990.	U081	A11	1990. Aug. 8,
U034	A11	Aug. 8, 1990.	U082	A11	1990. Aug. 8,
U035	A11	Aug. 8, 1990.	U083	A11	1990. Aug. 8,
U036	A11	Aug. 8, 1990.	U084	A11	1990. Aug. 8,
U037	A11	Aug. 8, 1990.	U085	A11	1990. Aug. 8,
U038	A11	Aug. 8, 1990.	U086	A11	1990. Aug. 8,
U039	A11	Aug. 8, 1990.	U087	A11	1990. June 8,
U041	A11	Aug. 8, 1990.	U088	A11	1989. June 8,
U042	A11	Aug. 8, 1990.	U089	A11	1989. Aug. 8,
U043	A11	Aug. 8, 1990.	U090	A11	1990. Aug. 8,
U044	A11	Aug. 8, 1990.	U091	A11	1990. Aug. 8,
U045	A11	Aug. 8, 1990.	U092	A11	1990. Aug. 8,
U046	A11	Aug. 8, 1990.	U093	A11	1990. Aug. 8,
U047	A11	Aug. 8, 1990.	U094	A11	1990. Aug. 8,
U048	A11	Aug. 8, 1990.	U095	A11	1990. Aug. 8,
U049	A11	Aug. 8, 1990.	U096	A11	1990. Aug. 8,
U050	A11	Aug. 8, 1990.	U097	A11	1990. Aug. 8,
U051	A11	Aug. 8, 1990.	U098	A11	1990. Aug. 8,
U052	A11	Aug. 8, 1990.	U099	A11	1990. Aug. 8,
U053	A11	Aug. 8, 1990.	U101	A11	1990. Aug. 8,
U055	A11	Aug. 8, 1990.	U102	A11	1990. June 8,
U056	A11	Aug. 8, 1990.	U103	A11	1989. Aug. 8,
U057	A11	Aug. 8, 1990.	U105	A11	1990. Aug. 8,
U058	A11	June 8, 1989.	U106	A11	1990. Aug. 8,
U059	A11	Aug. 8, 1990.	U107	A11	1990. June 8,
U060	A11	Aug. 8, 1990.	U108	A11	1989. Aug. 8,
U061	A11	Aug. 8, 1990.	U109	A11	1990. Aug. 8,
U062	A11	Aug. 8, 1990.	U110	A11	1990. Aug. 8,
U063	A11	Aug. 8, 1990.	U111	A11	1990. Aug. 8,
U064	A11	Aug. 8, 1990.	U112	A11	1990. Aug. 8,
U066	A11	Aug. 8, 1990.	U113	A11	1990. Aug. 8,
U067	A11	Aug. 8, 1990.	U114	A11	1990. Aug. 8,
U068	A11	Aug. 8, 1990.	U115	A11	1990. Aug. 8,
U069	A11	June 30,			1990.

U116	A11	Aug. 8, 1990.	U160	A11	1990.
U117	A11	Aug. 8, 1990.	U161	A11	Aug. 8, 1990.
U118	A11	Aug. 8, 1990.	U162	A11	Aug. 8, 1990.
U119	A11	Aug. 8, 1990.	U163	A11	Aug. 8, 1990.
U120	A11	Aug. 8, 1990.	U164	A11	Aug. 8, 1990.
U121	A11	Aug. 8, 1990.	U165	A11	Aug. 8, 1990.
U122	A11	Aug. 8, 1990.	U166	A11	Aug. 8, 1990.
U123	A11	Aug. 8, 1990.	U167	A11	Aug. 8, 1990.
U124	A11	Aug. 8, 1990.	U168	A11	Aug. 8, 1990.
U125	A11	Aug. 8, 1990.	U169	A11	Aug. 8, 1990.
U126	A11	Aug. 8, 1990.	U170	A11	Aug. 8, 1990.
U127	A11	Aug. 8, 1990.	U171	A11	Aug. 8, 1990.
U128	A11	Aug. 8, 1990.	U172	A11	Aug. 8, 1990.
U129	A11	Aug. 8, 1990.	U173	A11	Aug. 8, 1990.
U130	A11	Aug. 8, 1990.	U174	A11	Aug. 8, 1990.
U131	A11	Aug. 8, 1990.	U176	A11	Aug. 8, 1990.
U132	A11	Aug. 8, 1990.	U177	A11	Aug. 8, 1990.
U133	A11	Aug. 8, 1990.	U178	A11	Aug. 8, 1990.
U134	A11	Aug. 8, 1990.	U179	A11	Aug. 8, 1990.
U135	A11	Aug. 8, 1990.	U180	A11	Aug. 8, 1990.
U136	Wastewater	Aug. 8, 1990.	U181	A11	Aug. 8, 1990.
U136	Nonwastewater	May 8, 1992.	U182	A11	Aug. 8, 1990.
U137	A11	Aug. 8, 1990.	U183	A11	Aug. 8, 1990.
U138	A11	Aug. 8, 1990.	U184	A11	Aug. 8, 1990.
U140	A11	Aug. 8, 1990.	U185	A11	Aug. 8, 1990.
U141	A11	Aug. 8, 1990.	U186	A11	Aug. 8, 1990.
U142	A11	Aug. 8, 1990.	U187	A11	Aug. 8, 1990.
U143	A11	Aug. 8, 1990.	U188	A11	Aug. 8, 1990.
U144	A11	Aug. 8, 1990.	U189	A11	Aug. 8, 1990.
U145	A11	Aug. 8, 1990.	U190	A11	June 8, 1989.
U146	A11	Aug. 8, 1990.	U191	A11	Aug. 8, 1990.
U147	A11	Aug. 8, 1990.	U192	A11	Aug. 8, 1990.
U148	A11	Aug. 8, 1990.	U193	A11	Aug. 8, 1990.
U149	A11	Aug. 8, 1990.	U194	A11	June 8, 1989.
U150	A11	Aug. 8, 1990.	U196	A11	Aug. 8, 1990.
U151	Wastewater	Aug. 8, 1990.	U197	A11	Aug. 8, 1990.
U151	Nonwastewater	May 8, 1992.	U200	A11	Aug. 8, 1990.
U152	A11	Aug. 8, 1990.	U201	A11	Aug. 8, 1990.
U153	A11	Aug. 8, 1990.	U203	A11	Aug. 8, 1990.
U154	A11	Aug. 8, 1990.	U204	A11	Aug. 8, 1990.
U155	A11	Aug. 8, 1990.	U205	A11	Aug. 8, 1990.
U156	A11	Aug. 8, 1990.	U206	A11	Aug. 8, 1990.
U157	A11	Aug. 8, 1990.	U207	A11	Aug. 8, 1990.
U158	A11	Aug. 8, 1990.	U208	A11	Aug. 8, 1990.
U159	A11	Aug. 8,			1990.

U209	All	Aug. 8, 1990.	U359	Mixed with radioactive wastes	1992.
U210	All	Aug. 8, 1990.	U359	All others	June 30, 1994.
U211	All	Aug. 8, 1990.	U364	Mixed with radioactive wastes	Nov. 9, 1992.
U213	All	Aug. 8, 1990.	U364	All others	Apr. 8, 1998.
U214	All	Aug. 8, 1990.	U365	Mixed with radioactive wastes	July 8, 1996.
U215	All	Aug. 8, 1990.	U365	All others	Apr. 8, 1998.
U216	All	Aug. 8, 1990.	U366	Mixed with radioactive wastes	July 8, 1996.
U217	All	Aug. 8, 1990.	U366	All others	Apr. 8, 1998.
U218	All	Aug. 8, 1990.	U366	All others	July 8, 1996.
U219	All	Aug. 8, 1990.	U367	Mixed with radioactive wastes	Apr. 8, 1998.
U220	All	Aug. 8, 1990.	U367	All others	July 8, 1996.
U221	All	June 8, 1989.	U372	Mixed with radioactive wastes	Apr. 8, 1998.
U222	All	Aug. 8, 1990.	U372	All others	July 8, 1996.
U223	All	June 8, 1989.	U373	Mixed with radioactive wastes	Apr. 8, 1998.
U225	All	Aug. 8, 1990.	U373	All others	July 8, 1996.
U226	All	Aug. 8, 1990.	U375	Mixed with radioactive wastes	Apr. 8, 1998.
U227	All	Aug. 8, 1990.	U375	All others	July 8, 1996.
U228	All	Aug. 8, 1990.	U376	Mixed with radioactive wastes	Apr. 8, 1998.
U234	All	Aug. 8, 1990.	U376	All others	July 8, 1996.
U235	All	June 8, 1989.	U377	Mixed with radioactive wastes	Apr. 8, 1998.
U236	All	Aug. 8, 1990.	U377	All others	July 8, 1996.
U237	All	Aug. 8, 1990.	U378	Mixed with radioactive wastes	Apr. 8, 1998.
U238	All	Aug. 8, 1990.	U378	All others	July 8, 1996.
U239	All	Aug. 8, 1990.	U379	Mixed with radioactive wastes	Apr. 8, 1998.
U240	All	Aug. 8, 1990.	U379	All others	July 8, 1996.
U243	All	Aug. 8, 1990.	U381	Mixed with radioactive wastes	Apr. 8, 1998.
U244	All	Aug. 8, 1990.	U381	All others	July 8, 1996.
U246	All	Aug. 8, 1990.	U382	Mixed with radioactive wastes	Apr. 8, 1998.
U247	All	Aug. 8, 1990.	U382	All others	July 8, 1996.
U248	All	Aug. 8, 1990.	U383	Mixed with radioactive wastes	Apr. 8, 1998.
U249	All	Aug. 8, 1990.	U383	All others	July 8, 1996.
U271	Mixed with radioactive wastes	Apr. 8, 1998.	U384	Mixed with radioactive wastes	Apr. 8, 1998.
U271	All others	July 8, 1996.	U384	All others	July 8, 1996.
U277	Mixed with radioactive wastes	Apr. 8, 1998.	U385	Mixed with radioactive wastes	Apr. 8, 1998.
U277	All others	July 8, 1996.	U385	All others	July 8, 1996.
U278	Mixed with radioactive wastes	Apr. 8, 1998.	U386	Mixed with radioactive wastes	Apr. 8, 1998.
U278	All others	July 8, 1996.	U386	All others	July 8, 1996.
U279	Mixed with radioactive wastes	Apr. 8, 1998.	U387	Mixed with radioactive wastes	Apr. 8, 1998.
U279	All others	July 8, 1996.	U387	All others	July 8, 1996.
U280	Mixed with radioactive wastes	Apr. 8, 1998.	U389	Mixed with radioactive wastes	Apr. 8, 1998.
U280	All others	July 8, 1996.	U389	All others	July 8, 1996.
U328	Mixed with radioactive wastes	June 30, 1994.	U390	Mixed with radioactive wastes	Apr. 8, 1998.
U328	All others	Nov. 9, 1992.	U390	All others	July 8, 1996.
U353	Mixed with radioactive wastes	June 30, 1994.	U391	Mixed with radioactive wastes	Apr. 8, 1998.
U353	All others	Nov. 9,	U391	All others	July 8, 1996.

U392	Mixed with radioactive wastes	Apr. 8, 1998.	3. All soil and debris contaminated with First Third wastes for which treatment standards are based on incineration	Aug. 8, 1990.
U392	All others	July 8, 1996.		
U393	Mixed with radioactive wastes	Apr. 8, 1998.	4. All soil and debris contaminated with Second Third wastes for which treatment standards are based on incineration	June 8, 1991.
U393	All others	July 8, 1996.		
U394	Mixed with radioactive wastes	Apr. 8, 1998.	5. All soil and debris contaminated with Third Third wastes or, First or Second Third "soft hammer" wastes which had treatment standards promulgated in the Third Third rule, for which treatment standards are based on incineration, vitrification, or mercury retorting, acid leaching followed by chemical precipitation, or thermal recovery of metals; as well as all inorganic solids debris contaminated with D004-D011 wastes, and all soil and debris contaminated with mixed RCRA/radioactive wastes	May 8, 1992.
U394	All others	July 8, 1996.		
U395	Mixed with radioactive wastes	Apr. 8, 1998.		
U395	All others	July 8, 1996.		
U396	Mixed with radioactive wastes	Apr. 8, 1998.		
U396	All others	July 8, 1996.		
U400	Mixed with radioactive wastes	Apr. 8, 1998.	6. Soil and debris contaminated with D012-D043, K141-K145, and K147-151 wastes	Dec. 19, 1994.
U400	All others	July 8, 1996.		
U401	Mixed with radioactive wastes	Apr. 8, 1998.	7. Debris (only) contaminated with F037, F038, K107-K112, K117, K118, K123-K126, K131, K132, K136, U328, U353, U359	Dec. 19, 1994.
U401	All others	July 8, 1996.		
U402	Mixed with radioactive wastes	Apr. 8, 1998.	8. Soil and debris contaminated with K156-K161, P127, P128, P188-P192, P194, P196-P199, P201-P205, U271, U277-U280, U364-U367, U372, U373, U375-U379, U381-U387, U389-U396, U400-U404, U407, and U409-U411 wastes	July 8, 1996.
U402	All others	July 8, 1996.		
U403	Mixed with radioactive wastes	Apr. 8, 1998.	9. Soil and debris contaminated with K088 wastes	Oct. 8, 1997.
U403	All others	July 8, 1996.		
U404	Mixed with radioactive wastes	Apr. 8, 1998.	10. Soil and debris contaminated with radioactive wastes mixed with K088, K156-K161, P127, P128, P188-P192, P194, P196-P199, P201-P205, U271, U277-U280, U364-U367, U372, U373, U375-U379, U381-U387, U389-U396, U400-U404, U407, and U409-U411 wastes	April 8, 1998.
U404	All others	July 8, 1996.		
U407	Mixed with radioactive wastes	Apr. 8, 1998.		
U407	All others	July 8, 1996.		
U409	Mixed with radioactive wastes	Apr. 8, 1998.	11. Soil and debris contaminated with F032, F034, and F035	May 12, 1997.
U409	All others	July 8, 1996.		
U410	Mixed with radioactive wastes	Apr. 8, 1998.	12. Soil and debris contaminated with newly identified D004-D011 toxicity characteristic wastes and mineral processing wastes.	Aug. 24, 1998.
U410	All others	July 8, 1996.		
U411	Mixed with radioactive wastes	Apr. 8, 1998.	13. Soil and debris contaminated with mixed radioactive newly identified D004-D011 characteristic wastes and mineral processing wastes.	May 26, 2000.
U411	All others	July 8, 1996.		

^aThis table does not include mixed radioactive wastes, from the First, Second, and Third Third rules, which received national capacity variance until May 8, 1992. This table also does not include contaminated soil and debris wastes.

^bThe standard was revised in the Third Third Final Rule, 55 FR 22520, June 1, 1990.

^cThe standard was revised in the Third Third Emergency Rule, 58 FR 29860, May 24, 1993; the original effective date was August 8, 1990.

^dThe standard was revised in the Phase II Final Rule, 59 FR 47982, Sept. 19, 1994; the original effective date was August 8, 1990.

^eThe standards for selected reactive wastes was revised in the Phase III Final Rule, 61 FR 15566, Apr. 8, 1996; the original effective date was August 8, 1990.

Note: Appendix VII is provided for the convenience of the reader.

R315-268-51. Appendix VIII to Rule R315-268 - LDR Effective Dates of Injected Prohibited Hazardous Wastes.

Table

National Capacity LDR Variances for UIC Wastes ^a		
Waste code	Waste category	Effective date
F001-F005	All spent F001-F005 solvent containing less than 1 percent total F001-F005 solvent constituents	Aug. 8, 1990.
D001 (except High TOC Ignitable Liquids Subcategory) ^c	All	Feb. 10, 1994.
D001 (High TOC Ignitable Characteristic Liquids Subcategory) ^c	Nonwastewater	Sept. 19, 1995.
D002 ^b	All	May 8, 1992.
D002 ^c	All	Feb. 10, 1994.
D003 (cyanides)	All	May 8, 1992.
D003	All	May 8,

Table 2

Summary of Effective Dates of Land Disposal Restrictions for Contaminated Soil and Debris (CSD)

Restricted hazardous waste in CSD	Effective date
1. Solvent-(F001-F005) and dioxin-(F020-F023 and F026-F028) containing soil and debris from CERCLA response or RCRA corrective actions	Nov. 8, 1990.
2. Soil and debris not from CERCLA response or RCRA corrective actions contaminated with less than 1% total solvents (F001-F005) or dioxins (F020-F023 and F026-F028)	Nov. 8, 1988.

(sulfides)		1992.			1991.
D003	All	May 8,	K011	Wastewater	May 8,
(explosives,		1992.			1992.
reactives)			K013	Nonwastewater	June 8,
D007	All	May 8,	K013	Wastewater	1991.
		1992.			May 8,
D009	Nonwastewater	May 8,	K014	All	1992.
		1992.			May 8,
D012	All	Sept.19,	K016 (dilute)	All	1992.
		1995.			June 8,
D013	All	Sept.19,	K049	All	1991.
		1995.			Aug. 8,
D014	All	Sept.19,	K050	All	1990.
		1995.			Aug. 8,
D015	All	Sept.19,	K051	All	1990.
		1995.			Aug. 8,
D016	All	Sept.19,	K052	All	1990.
		1995.			Aug. 8,
D017	All	Sept.19,	K062	All	1990.
		1995.			Aug. 8,
D018	All, including mixed with	Apr. 8,	K071	All	1990.
	radioactive wastes	1998.			Aug. 8,
D019	All, including mixed with	Apr. 8,	K088	All	1990.
	radioactive wastes	1998.			Jan. 8,
D020	All, including mixed with	Apr. 8,	K104	All	1997.
	radioactive wastes	1998.			Aug. 8,
D021	All, including mixed with	Apr. 8,	K107	All	1990.
	radioactive wastes	1998.			Nov. 8,
D022	All, including mixed with	Apr. 8,	K108	All	1992.
	radioactive wastes	1998.			Nov. 9,
D023	All, including mixed radioactive	Apr. 8,	K109	All	1992.
	wastes	1998.			Nov. 9,
D024	All, including mixed radioactive	Apr. 8,	K110	All	1992.
	wastes	1998.			Nov. 9,
D025	All, including mixed radioactive	Apr. 8,	K111	All	1992.
	wastes	1998.			Nov. 9,
D026	All, including mixed radioactive	Apr. 8,	K112	All	1992.
	wastes	1998.			Nov. 9,
D027	All, including mixed radioactive	Apr. 8,	K117	All	1992.
	wastes	1998.			June 30,
D028	All, including mixed radioactive	Apr. 8,	K118	All	1995.
	wastes	1998.			June 30,
D029	All, including mixed radioactive	Apr. 8,	K123	All	1995.
	wastes	1998.			Nov. 9,
D030	All, including mixed radioactive	Apr. 8,	K124	All	1992.
	wastes	1998.			Nov. 9,
D031	All, including mixed radioactive	Apr. 8,	K125	All	1992.
	wastes	1998.			Nov. 9,
D032	All, including mixed radioactive	Apr. 8,	K126	All	1992.
	wastes	1998.			Nov. 9,
D033	All, including mixed radioactive	Apr. 8,	K131	All	1992.
	wastes	1998.			June 30,
D034	All, including mixed radioactive	Apr. 8,	K132	All	1995.
	wastes	1998.			June 30,
D035	All, including mixed radioactive	Apr. 8,	K136	All	1995.
	wastes	1998.			Nov. 9,
D036	All, including mixed radioactive	Apr. 8,	K141	All	1992.
	wastes	1998.			Dec. 19,
D037	All, including mixed radioactive	Apr. 8,	K142	All	1994.
	wastes	1998.			Dec. 19,
D038	All, including mixed radioactive	Apr. 8,	K143	All	1994.
	wastes	1998.			Dec. 19,
D039	All, including mixed radioactive	Apr. 8,	K144	All	1994.
	wastes	1998.			Dec. 19,
D040	All, including mixed radioactive	Apr. 8,	K145	All	1994.
	wastes	1998.			Dec. 19,
D041	All, including mixed radioactive	Apr. 8,	K147	All	1994.
	wastes	1998.			Dec. 19,
D042	All, including mixed radioactive	Apr. 8,	K148	All	1994.
	wastes	1998.			Dec. 19,
D043	All, including mixed radioactive	Apr. 8,	K149	All	1994.
	wastes	1998.			Dec. 19,
F007	All	June 8,	K150	All	1994.
		1991.			Dec. 19,
F032	All, including mixed radioactive	May 12,	K151	All	1994.
	wastes	1999.			Dec. 19,
F034	All, including mixed radioactive	May 12,	K156	All	1994.
	wastes	1999.			July 8,
F035	All, including mixed radioactive	May 12,	K157	All	1996.
	wastes	1999.			July 8,
F037	All	Nov. 8,	K158	All	1996.
		1992.			July 8,
F038	All	Nov. 8,	K159	All	1996.
		1992.			July 8,
F039	Wastewater	May 8,	K160	All	1996.
		1992.			July 8,
K009	Wastewater	June 8,	K161	All	1996.
		1991.			July 8,
K011	Nonwastewater	June 8,			1996.

Code	Description	Effective Date	Waste Code	Waste Description	Effective Date
NA	Newly identified mineral processing wastes from titanium dioxide production and mixed radioactive/newly identified D004-D011 characteristic wastes and mineral processing wastes.	May 26, 2000.	U386	All	1996. July 8, 1996.
			U387	All	July 8, 1996.
			U389	All	July 8, 1996.
P127	All	July 8, 1996.	U390	All	July 8, 1996.
P128	All	July 8, 1996.	U391	All	July 8, 1996.
P185	All	July 8, 1996.	U392	All	July 8, 1996.
P188	All	July 8, 1996.	U395	All	July 8, 1996.
P189	All	July 8, 1996.	U396	All	July 8, 1996.
P190	All	July 8, 1996.	U400	All	July 8, 1996.
P191	All	July 8, 1996.	U401	All	July 8, 1996.
P192	All	July 8, 1996.	U402	All	July 8, 1996.
P194	All	July 8, 1996.	U403	All	July 8, 1996.
P196	All	July 8, 1996.	U404	All	July 8, 1996.
P197	All	July 8, 1996.	U407	All	July 8, 1996.
P198	All	July 8, 1996.	U409	All	July 8, 1996.
P199	All	July 8, 1996.	U410	All	July 8, 1996.
P201	All	July 8, 1996.	U411	All	July 8, 1996.
P202	All	July 8, 1996.			
P203	All	July 8, 1996.			
P204	All	July 8, 1996.			
P205	All	July 8, 1996.			
U271	All	July 8, 1996.			
U277	All	July 8, 1996.			
U278	All	July 8, 1996.			
U279	All	July 8, 1996.			
U280	All	July 8, 1996.			
U328	All	Nov. 9, 1992.			
U353	All	Nov. 9, 1992.			
U359	All	Nov. 9, 1992.			
U364	All	July 8, 1996.			
U365	All	July 8, 1996.			
U366	All	July 8, 1996.			
U367	All	July 8, 1996.			
U372	All	July 8, 1996.			
U373	All	July 8, 1996.			
U375	All	July 8, 1996.			
U376	All	July 8, 1996.			
U377	All	July 8, 1996.			
U378	All	July 8, 1996.			
U379	All	July 8, 1996.			
U381	All	July 8, 1996.			
U382	All	July 8, 1996.			
U383	All	July 8, 1996.			
U384	All	July 8, 1996.			
U385	All	July 8, 1996.			

^aWastes that are deep well disposed on-site receive a six-month variance, with restrictions effective in November 1990.

^bDeepwell injected D002 liquids with a pH less than 2 shall meet the California List treatment standards on August 8, 1990.

^cManaged in systems defined in 40 CFR 144.6(e) and 144.6(e) as Class V injection wells, that do not engage in CWA-equivalent treatment before injection.

Note: This table is provided for the convenience of the reader.

R315-268-56. Appendix IX to Rule R315-268 - Extraction Procedure (EP) Toxicity Test Method and Structural Integrity Test (Method 1310B).

Note: The EP (Method 1310B) is published in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section R315-260-11.

R315-268-57. Appendix XI to Rule R315-268-Metal Bearing Wastes Prohibited from Dilution in a Combustion Unit According to Subsection R315-268-3(c).

Metal Bearing Wastes Prohibited From Dilution in a Combustion Unit According to Subsection R315-268-3(c)¹

Table

Waste code	Waste description
D004	Toxicity Characteristic for Arsenic.
D005	Toxicity Characteristic for Barium.
D006	Toxicity Characteristic for Cadmium.
D007	Toxicity Characteristic for Chromium.
D008	Toxicity Characteristic for Lead.
D009	Toxicity Characteristic for Mercury.
D010	Toxicity Characteristic for Selenium.
D011	Toxicity Characteristic for Silver.
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.
F007	Spent cyanide plating bath solutions from electroplating operations.
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides

- are used in the process.
- F009 Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.
- F010 Quenching bath residues from oil baths from metal treating operations where cyanides are used in the process.
- F011 Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.
- F012 Quenching waste water treatment sludges from metal heat treating operations where cyanides are used in the process.
- F019 Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum car washing when such phosphating is an exclusive conversion coating process.
- K002 Wastewater treatment sludge from the production of chrome yellow and orange pigments.
- K003 Wastewater treatment sludge from the production of molybdate orange pigments.
- K004 Wastewater treatment sludge from the production of zinc yellow pigments.
- K005 Wastewater treatment sludge from the production of chrome green pigments.
- K006 Wastewater treatment sludge from the production of chrome oxide green pigments, anhydrous and hydrated.
- K007 Wastewater treatment sludge from the production of iron blue pigments.
- K008 Oven residue from the production of chrome oxide green pigments.
- K061 Emission control dust/sludge from the primary production of steel in electric furnaces.
- K069 Emission control dust/sludge from secondary lead smelting.
- K071 Brine purification muds from the mercury cell processes in chlorine production, where separately prepurified brine is not used.
- K100 Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.
- K106 Sludges from the mercury cell processes for making chlorine.
- P010 Arsenic acid H_3AsO_4
- P011 Arsenic oxide As_2O_5
- P012 Arsenic trioxide
- P013 Barium cyanide
- P015 Beryllium
- P029 Copper cyanide $Cu(CN)$
- P074 Nickel cyanide $Ni(CN)_2$
- P087 Osmium tetroxide
- P099 Potassium silver cyanide
- P104 Silver cyanide
- P113 Thallium (I) selenite
- P114 Thallium (I) selenite
- P115 Thallium (I) sulfate
- P119 Ammonium vanadate
- P120 Vanadium oxide V_2O_5
- P121 Zinc cyanide.
- U032 Calcium chromate.
- U145 Lead phosphate.
- U151 Mercury.
- U204 Selenious acid.U205 Selenium disulfide.
- U216 Thallium (I) chloride.
- U217 Thallium (I) nitrate.

¹A combustion unit is defined as any thermal technology subject to Sections R315-264-340 through 351; 40 CFR 265.340 through 352, which are adopted by reference; and/or Sections R315-266-100 through 112.

KEY: hazardous waste
April 15, 2016

19-6-105
19-6-106

R315. Environmental Quality, Waste Management and Radiation Control, Waste Management.

R315-270. Hazardous Waste Permit Program.

R315-270-1. Hazardous Waste Permit Program -- Purpose and Scope of These Regulations.

(a) No person shall own, construct, modify, or operate any facility for the purpose of treating, storing, or disposing of hazardous waste without first submitting, and receiving the approval of the Director for, a hazardous waste permit for that facility. However, any person owning or operating a facility on or before November 19, 1980, who has given timely notification as required by section 3010 of the Resource Conservation and Recovery Act (RCRA) of 1976, 42 U.S.C., section 6921, et seq., and who has submitted a proposed hazardous waste permit as required by Section R315-270-1 and Section 19-6-108 for that facility, may continue to operate that facility without violating Section R315-270-1 until such time as the permit is approved or disapproved pursuant to Section R315-270-1.

(b)(1) The Director shall review each proposed hazardous waste permit application to determine whether the application will be in accord with the provisions of Rules R315-260 through 266, 268, 270 and 273, and Section 19-6-108 and, on that basis, shall approve or disapprove the application within the applicable time period specified in Section 19-6-108. If, after the receipt of plans, specifications, or other information required under Rule R315-270 and Section 19-6-108 and within the applicable time period of Section 19-6-108, the Director determines that the proposed construction, installation or establishment or any part of it will not be in accord with the requirements of Rule R315-270 or other applicable rules, he shall issue an order prohibiting the construction, installation or establishment of the proposal in whole or in part. The date of submission shall be deemed to be the date of all required information is provided to the Director as required by Rule R315-270.

(2) Any permit application which does not meet the requirements of Rules 315-260 through 266, 268 270 and 273 shall be disapproved within the applicable time period specified in Section 19-6-108. If within the applicable time period specified in Section 19-6-108 the Director fails to approve or disapprove the permit application or to request the submission of any additional information or modification to the application, the application shall not be deemed approved but the applicant may petition the Director for a decision or seek judicial relief requiring a decision of approval or disapproval.

(3) An application for approval of a hazardous waste permit consists of two parts, part A and part B. For an existing facility, the requirement is satisfied by submitting only part A of the application until the date the Director sets for each individual facility for submitting part B of the application, which date shall be in no case less than six months after the Director gives notice to a particular facility that it shall submit part B of the application.

(c) Scope of the hazardous waste permit requirement. Section 19-6-108 requires a permit for the "treatment," "storage," and "disposal" of any "hazardous waste" as identified or listed in Rule R315-261. The terms "treatment," "storage," "disposal," and "hazardous waste" are defined in Section R315-270-2. Owners and operators of hazardous waste management units shall have permits during the active life, including the closure period, of the unit. Owners and operators of surface impoundments, landfills, land treatment units, and waste pile units that received waste after July 26, 1982, or that certified closure, according to 40 CFR 265.115, which is adopted by reference, after January 26, 1983, shall have post-closure permits, unless they demonstrate closure by removal or decontamination as provided under Subsections R315-270-1(c)(5) and (6), or obtain an enforceable document in lieu of a post-closure permit, as provided under Subsection R315-270-1(c)(7). If a post-closure permit is required, the permit shall

address applicable Rule R315-264 groundwater monitoring, unsaturated zone monitoring, corrective action, and post-closure care requirements. The denial of a permit for the active life of a hazardous waste management facility or unit does not affect the requirement to obtain a post-closure permit under Section R315-270-1.

(1) Specific inclusions. Owners and operators of certain facilities require hazardous waste permits as well as permits under other programs for certain aspects of the facility operation. Hazardous waste permits are required for:

(i) Injection wells that dispose of hazardous waste, and associated surface facilities that treat, store or dispose of hazardous waste. However, the owner and operator with a Utah or Federal UIC permit, shall be deemed to have a "permit by rule" for the injection well itself if they comply with the requirements of Subsection R315-270-60(b).

(ii) Treatment, storage, or disposal of hazardous waste at facilities requiring an NPDES permit. However, the owner and operator of a publicly owned treatment works receiving hazardous waste shall be deemed to have a "permit by rule" for that waste if they comply with the requirements of Section R315-270-60(c).

(2) Specific exclusions. The following persons are among those who are not required to obtain a hazardous waste permit:

(i) Generators who accumulate hazardous waste on-site for less than the time periods provided in Section R315-262-34.

(ii) Farmers who dispose of hazardous waste pesticides from their own use as provided in Section R315-262-70;

(iii) Persons who own or operate facilities solely for the treatment, storage or disposal of hazardous waste excluded from regulations under Rule R315-270 by Sections R315-261-4 or 5, small generator exemption.

(iv) Owners or operators of totally enclosed treatment facilities as defined in Section R315-260-10.

(v) Owners and operators of elementary neutralization units or wastewater treatment units as defined in Section R315-260-10.

(vi) Transporters storing manifested shipments of hazardous waste in containers meeting the requirements of Section R315-262-30 at a transfer facility for a period of ten days or less.

(vii) Persons adding absorbent material to waste in a container, as defined in Section R315-260-10, and persons adding waste to absorbent material in a container, provided that these actions occur at the time waste is first placed in the container; and Subsection R315-264-17(b) and Sections R315-264-171, and 172 are complied with.

(viii) Universal waste handlers and universal waste transporters, as defined in Section R315-260-10, managing the wastes listed below. These handlers are subject to regulation under Rule R315-273.

(A) Batteries as described in Section R315-273-2;
 (B) Pesticides as described in Section R315-273-3;
 (C) Mercury-containing equipment as described in Section R315-273-4; and
 (D) Lamps as described in Section R315-273-5.

(3) Further exclusions.

(i) A person is not required to obtain a permit for treatment or containment activities taken during immediate response to any of the following situations:

(A) A discharge of a hazardous waste;
 (B) An imminent and substantial threat of a discharge of hazardous waste;
 (C) A discharge of a material which, when discharged, becomes a hazardous waste.

(ii) Any person who continues or initiates hazardous waste treatment or containment activities after the immediate response is over is subject to all applicable requirements of Rule R315-270 for those activities.

(iii) In the case of emergency responses involving military munitions, the responding military emergency response specialist's organizational unit shall retain records for three years identifying the dates of the response, the responsible persons responding, the type and description of material addressed, and its disposition.

(4) Permits for less than an entire facility. The Director may issue or deny a permit for one or more units at a facility without simultaneously issuing or denying a permit to all of the units at the facility. The interim status of any unit for which a permit has not been issued or denied is not affected by the issuance or denial of a permit to any other unit at the facility.

(5) Closure by removal. Owners/operators of surface impoundments, land treatment units, and waste piles closing by removal or decontamination under Rule R315-265 standards shall obtain a post-closure permit unless they can demonstrate to the Director that the closure met the standards for closure by removal or decontamination in Section R315-264-228, Subsection R315-264-280(e), or Section R315-264-258, respectively. The demonstration may be made in the following ways:

(i) If the owner/operator has submitted a part B application for a post-closure permit, the owner/operator may request a determination, based on information contained in the application, that Rule R315-264 closure by removal standards were met. If the Director believes that Rule R315-264 standards were met, The Director shall notify the public of this proposed decision, allow for public comment, and reach a final determination according to the procedures in Subsection R315-270-1(c)(6).

(ii) If the owner/operator has not submitted a part B application for a post-closure permit, the owner/operator may petition the Director for a determination that a post-closure permit is not required because the closure met the applicable Rule R315-264 closure standards.

(A) The petition shall include data demonstrating that closure by removal or decontamination standards of Rule R315-264 were met.

(B) The Director shall approve or deny the petition according to the procedures outlined in Subsection R315-270-1(c)(6).

(6) Procedures for closure equivalency determination.

(i) If a facility owner/operator seeks an equivalency demonstration under Subsection R315-270-1(c)(5), the Director shall provide the public, through a newspaper notice, the opportunity to submit written comments on the information submitted by the owner/operator within 30 days from the date of the notice. The Director shall also, in response to a request or at the Director's discretion, hold a public hearing whenever such a hearing might clarify one or more issues concerning the equivalence of the Rule R315-265 closure to a Rule R315-264 closure. The Director shall give public notice of the hearing at least 30 days before it occurs. Public notice of the hearing may be given at the same time as notice of the opportunity for the public to submit written comments, and the two notices may be combined.

(ii) The Director shall determine whether the Rule R315-265 closure met the Rule R315-264 closure by removal or decontamination requirements within 90 days of its receipt. If the Director finds that the closure did not meet the applicable Rule R315-264 standards, the Director shall provide the owner/operator with a written statement of the reasons why the closure failed to meet Rule R315-264 standards. The owner/operator may submit additional information in support of an equivalency demonstration within 30 days after receiving such written statement. The Director shall review any additional information submitted and make a final determination within 60 days.

(iii) If the Director determines that the facility did not

close in accordance with Rule R315-264 closure by removal standards, the facility is subject to post-closure permitting requirements.

(7) Enforceable documents for post-closure care. At the discretion of the Director, an owner or operator may obtain, in lieu of a post-closure permit, an enforceable document imposing the requirements of 40 CFR 265.121, which is adopted by reference. "Enforceable document" means an order, a permit, or other document issued by the Director including, but not limited to, a corrective action order issued by EPA under section 3008(h), a CERCLA remedial action, or a closure or post-closure permit.

R315-270-2. Hazardous Waste Permit Program -- Definitions.

The following definitions apply to Rules R315-270 and 124. Terms not defined in Section R315-270-2 have the meaning given by Section R315-260-10 and Section 19-6-102.

(a) "Administrator" means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

(b) "Application" means the information required by the Director under Section R315-270-14 through 29.

(c) "Aquifer" means a geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.

(d) "Closure" means the act of securing a Hazardous Waste Management facility pursuant to the requirements of Rule R315-264.

(e) "Component" means any constituent part of a unit or any group of constituent parts of a unit which are assembled to perform a specific function, e.g., a pump seal, pump, kiln liner, kiln thermocouple.

(f) "Corrective Action Management Unit" or CAMU means an area within a facility that is designated by the Director under Sections R315-264-550 through 555 for the purpose of implementing corrective action requirements under Section R315-264-101 and RCRA section 3008(h). A CAMU shall only be used for the management of remediation wastes pursuant to implementing such corrective action requirements at the facility.

(g) "CWA" means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act amendments of 1972) Pub. L. 92-500, as amended by Pub. L. 92-217 and Pub. L. 95-576; 33 U.S.C. 1251 et seq.

(h) "Director" means the Director of the Division of Waste Management and Radiation Control.

(i) "Disposal" has the meaning as found in Section 19-6-102.

(j) "Disposal facility" means a facility or part of a facility at which hazardous waste is intentionally placed into or on the land or water, and at which hazardous waste will remain after closure. The term disposal facility does not include a corrective action management unit into which remediation wastes are placed.

(k) "Draft permit" means a document prepared under Section R315-124-6 indicating the Director's tentative decision to issue or deny, modify, revoke and reissue, terminate, or reissue a permit. A notice of intent to terminate a permit, and a notice of intent to deny a permit, as discussed in Section R315-124-5, are types of draft permits. A denial of a request for modification, revocation and reissuance, or termination, as discussed in Section R315-124-5 is not a "draft permit." A proposed permit is not a draft permit.

(l) "Elementary neutralization unit" means a device which:

(1) Is used for neutralizing wastes only because they exhibit the corrosivity characteristic defined in Section R315-261-22, or are listed in Sections R315-261-30 through 35 only

for this reason; and

(2) Meets the definition of tank, tank system, container, transport vehicle, or vessel in Section R315-260-10.

(m) "Emergency permit" means a permit issued in accordance with Section R315-270-61.

(n) "Environmental Protection Agency (EPA)" means the United States Environmental Protection Agency.

(o) "EPA" means the United States Environmental Protection Agency.

(p) "Existing hazardous waste management (HWM) facility" or "existing facility" means a facility which was in operation or for which construction commenced on or before November 19, 1980. A facility has commenced construction if:

(1) The owner or operator has obtained the Federal, State and local approvals or permits necessary to begin physical construction; and either

(2)(i) A continuous on-site, physical construction program has begun; or

(ii) The owner or operator has entered into contractual obligations which cannot be cancelled or modified without substantial loss for physical construction of the facility to be completed within a reasonable time.

(q) "Facility mailing list" means the mailing list for a facility maintained by the Director in accordance with Subsection R315-124-10(c)(1)(ix).

(r) "Facility" or "activity" means any HWM facility or any other facility or activity, including land or appurtenances thereto, that is subject to regulation under Sections 19-6-101 through 125.

(s) "Federal, State and local approvals or permits necessary to begin physical construction" means permits and approvals required under Federal, State or local hazardous waste control statutes, regulations or ordinances.

(t) "Functionally equivalent component" means a component which performs the same function or measurement and which meets or exceeds the performance specifications of another component.

(u) "Generator" means any person, by site location, whose act, or process produces "hazardous waste" identified or listed in Rule R315-261.

(v) "Ground water" means water below the land surface in a zone of saturation.

(w) "Hazardous waste" means a hazardous waste as defined in Section 19-6-102 and further defined in Section R315-261-3.

(x) "Hazardous Waste Management facility" means all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units, for example, one or more landfills, surface impoundments, or combinations of them.

(y) "HWM facility" means Hazardous Waste Management facility.

(z) "Injection well" means a well into which fluids are being injected.

(aa) "In operation" means a facility which is treating, storing, or disposing of hazardous waste.

(bb) "Major facility" means any facility or activity classified as such by the Regional Administrator in conjunction with the Director.

(cc) "Manifest" means the shipping document originated and signed by the generator which contains the information required by Sections R315-262-20 through 27.

(dd) "National Pollutant Discharge Elimination System" means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the CWA. The term includes

an approved program.

(ee) "NPDES" means National Pollutant Discharge Elimination System.

(ff) "New HWM facility" means a Hazardous Waste Management facility which began operation or for which construction commenced after November 19, 1980.

(gg) "Off-site" means any site which is not on-site.

(hh) "On-site" means on the same or geographically contiguous property which may be divided by public or private right(s)-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along, the right(s)-of-way. Non-contiguous properties owned by the same person but connected by a right-of-way which the person controls and to which the public does not have access, is also considered on-site property.

(ii) "Owner or operator" means the owner or operator of any facility or activity subject to regulation under Sections 19-6-101 through 125.

(jj) "Permit" means an operation plan under Section 19-6-108 to implement the requirements of Rules R315-270 and 124. Permit includes permit by rule, Section R315-270-60, and emergency permit, Section R315-270-61. Permit does not include interim status, Sections R315-270-70 through 73, or any permit which has not been the subject of final action by the Director, such as a draft permit or a proposed permit.

(kk) "Permit-by-rule" means a provision of these rules stating that a facility or activity is deemed to have a permit if it meets the requirements of the provision.

(ll) "Person" means person as defined in Subsection 19-1-103(4).

(mm) "Physical construction" means excavation, movement of earth, erection of forms or structures, or similar activity to prepare an HWM facility to accept hazardous waste.

(nn) "POTW" means publicly owned treatment works.

(oo) "Publicly owned treatment works" means any device or system used in the treatment, including recycling and reclamation, of municipal sewage or industrial wastes of a liquid nature which is owned by a State or municipality. This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

(pp) "RCRA" means the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976, Pub. L. 94-580, as amended by Pub. L. 95-609 and Pub. L. 96-482, 42 U.S.C. 6901 et seq.

(qq) "Regional Administrator" means the Regional Administrator of the appropriate Regional Office of the Environmental Protection Agency or the authorized representative of the Regional Administrator.

(rr) "Remedial Action Plan" (RAP) means a special form of permit that a facility owner or operator may obtain instead of a permit issued under Sections R315-270-3 through 66, to authorize the treatment, storage or disposal of hazardous remediation waste, as defined in Section R315-260-10, at a remediation waste management site.

(ss) "Schedule of compliance" means a schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements, for example, actions, operations, or milestone events, leading to compliance with Sections 19-6-101 through 125 and rules adopted thereunder.

(tt) "SDWA" means the Safe Drinking Water Act, Pub. L. 95-523, as amended by Pub. L. 95-1900; 42 U.S.C. 3001 et seq.

(uu) "Site" means the land or water area where any facility or activity is physically located or conducted, including adjacent land used in connection with the facility or activity.

(vv) "State" means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, and the Commonwealth of the Northern Mariana Islands.

(ww) "Storage" means the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed, or stored elsewhere.

(xx) "Transfer facility" means any transportation-related facility including loading docks, parking areas, storage areas and other similar areas where shipments of hazardous waste are held during the normal course of transportation.

(yy) "Transporter" means a person engaged in the off-site transportation of hazardous waste by air, rail, highway or water.

(zz) "Treatment" means any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such wastes, or so as to recover energy or material resources from the waste, or so as to render such waste non-hazardous, or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume.

(aaa) "UIC" means the Underground Injection Control Program under part C of the Safe Drinking Water Act, including an approved program.

(bbb) "Underground injection" means a well injection.

(ccc) "Underground source of drinking water" means an aquifer or its portion:

(1)(i) Which supplies any public water system; or
(ii) Which contains a sufficient quantity of ground water to supply a public water system; and

(A) Currently supplies drinking water for human consumption; or

(B) Contains fewer than 10,000 mg/l total dissolved solids; and

(2) Which is not an exempted aquifer.

(ddd) "USDW" means underground source of drinking water.

(eee) "Wastewater treatment unit" means a device which:

(1) Is part of a wastewater treatment facility which is subject to regulation under Rule R317-1 through 15; and

(2) Receives and treats or stores an influent wastewater which is a hazardous waste as defined in Section R315-261-3, or generates and accumulates a wastewater treatment sludge which is a hazardous waste as defined in Section R315-261-3, or treats or stores a wastewater treatment sludge which is a hazardous waste as defined in Section R315-261-3; and

(3) Meets the definition of tank or tank system in Section R315-260-10.

R315-270-4. Hazardous Waste Permit Program -- Effect of a Permit.

(a)(1) Compliance with a permit during its term constitutes compliance, for purposes of enforcement, with Rules R315-260 through 266, 268, 270 and 124 except for those requirements not included in the permit which:

(i) Become effective by statute;

(ii) Are promulgated under Rule R315-268 restricting the placement of hazardous wastes in or on the land;

(iii) Are promulgated under Rule R315-264 regarding leak detection systems for new and replacement surface impoundment, waste pile, and landfill units, and lateral expansions of surface impoundment, waste pile, and landfill units. The leak detection system requirements include double liners, CQA programs, monitoring, action leakage rates, and response action plans, and shall be implemented through the procedures of Section R315-270-42 Class 1 permit modifications; or

(iv) Are promulgated under 40 CFR 265.1030 through 1035, 1050 through 1064, or 1080 through 1090, which are adopted by reference limiting air emissions.

(2) A permit may be modified, revoked and reissued, or terminated during its term for cause as set forth in Sections R315-270-41 and 43, or the permit may be modified upon the

request of the permittee as set forth in Section R315-270-42.

(b) The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege.

(c) The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.

R315-270-10. Hazardous Waste Permit Program -- General Application Requirements.

(a) Applying for a permit. Below is information on how to obtain a permit and where to find requirements for specific permits:

(1) If you are covered by permits by rule, Section R315-270-60, you need not apply.

(2) If you currently have interim status, you shall apply for permits when required by the Director.

(3) If you are required to have a permit, including new applicants and permittees with expiring permits, you shall complete, sign, and submit an application to the Director, as described in Section R315-270-10 and Sections R315-270-70 through 73.

(4) If you are seeking an emergency permit, the procedures for application, issuance, and administration are found exclusively in Section R315-270-61.

(5) If you are seeking a research, development, and demonstration permit, the procedures for application, issuance, and administration are found exclusively in Section R315-270-65.

(b) Who applies? When a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit, except that the owner shall also sign the permit application.

(c) Completeness.

(1) The Director shall not issue a permit before receiving a complete application for a permit except for permits by rule, or emergency permits. An application for a permit is complete when the Director receives an application form and any supplemental information which are completed to the Director's satisfaction. An application for a permit is complete notwithstanding the failure of the owner or operator to submit the exposure information described in Subsection R315-270-10(j). The Director may deny a permit for the active life of a hazardous waste management facility or unit before receiving a complete application for a permit.

(2) The Director shall review for completeness every permit application. Each permit application submitted by a new hazardous waste management facility, should be reviewed for completeness by the Director in accordance with the applicable review periods of 19-6-108. Upon completing the review, the Director shall notify the applicant in writing whether the permit application is complete. If the permit application is incomplete, the Director shall list the information necessary to make the permit application complete. When the permit application is for an existing hazardous waste management facility, the Director shall specify in the notice of deficiency a date for submitting the necessary information. The Director shall review information submitted in response to a notice of deficiency within 30 days after receipt. The Director shall notify the applicant that the permit application is complete upon receiving this information. After the permit application is complete, the Director may request additional information from an applicant but only when necessary to clarify, modify, or supplement previously submitted material.

(3) If an applicant fails or refuses to correct deficiencies in the permit application, the permit application may be denied and appropriate enforcement actions may be taken under the applicable provisions of the Utah Solid and Hazardous Waste Act.

(d) Information requirements. All applicants for permits

shall provide information set forth in Section R315-270-13 and applicable sections in Sections R315-270-14 through 29 to the Director, using the application form provided by the Director, if the Director has made such forms available.

(e) Existing HWM facilities and interim status qualifications.

(1) Owners and operators of existing hazardous waste management facilities or of hazardous waste management facilities in existence on the effective date of statutory or regulatory amendments under Sections 19-6-101 through 125 that render the facility subject to the requirement to have a permit shall submit part A of their permit application no later than:

(i) Six months after the date of publication of regulations which first require them to comply with the standards set forth in Rules R315-265 or 266, or

(ii) Thirty days after the date they first become subject to the standards set forth in Rules R315-265 or 266, whichever first occurs.

(iii) For generators generating greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month and treats, stores, or disposes of these wastes on-site, by March 24, 1987.

(2) Reserved

(3) The Director may by compliance order extend the date by which the owner and operator of an existing hazardous waste management facility shall submit part A of their permit application.

(4) The owner or operator of an existing hazardous waste management facility may be required to submit part B of their permit application. The Director may require submission of part B. Any owner or operator shall be allowed at least six months from the date of request to submit part B of the application. Any owner or operator of an existing hazardous waste management facility may voluntarily submit part B of the application at any time. Notwithstanding the above, any owner or operator of an existing hazardous waste management facility shall submit a part B permit application in accordance with the dates specified in Section R315-270-73. Any owner or operator of a land disposal facility in existence on the effective date of statutory or regulatory amendments under Sections 19-6-101 through 125 that render the facility subject to the requirement to have a permit shall submit a part B application in accordance with the dates specified in Section R315-270-73.

(5) Failure to furnish a requested part B application on time, or to furnish in full the information required by the part B application, is grounds for termination of interim status under Rule R315-124.

(f) New HWM facilities.

(1) Except as provided in Subsection R315-270-10(f)(3), no person shall begin physical construction of a new HWM facility without having submitted parts A and B of the permit application and having received a finally effective permit.

(2) An application for a permit for a new hazardous waste management facility, including both Parts A and B, may be filed any time after promulgation of those standards in Sections R315-264-170 through 1202 applicable to such facility. The application shall be filed with the Director. Except as provided in Subsection R315-270-10(f)(3), all applications shall be submitted at least 180 days before physical construction is expected to commence.

(3) Notwithstanding Subsection R315-270-10(f)(1), the owner or operator of a facility approved for the incineration of polychlorinated biphenyls may, at any time after construction or operation of such facility has begun, file an application for a permit to incinerate hazardous waste authorizing such facility to incinerate waste identified or listed under Rule R315-261.

(g) Updating permit applications.

(1) If any owner or operator of a hazardous waste

management facility has filed Part A of a permit application and has not yet filed part B, the owner or operator shall file an amended part A application:

(i) With the Director, within six months after the promulgation of revised regulations under Rule R315-261 listing or identifying additional hazardous wastes, if the facility is treating, storing or disposing of any of those newly listed or identified wastes.

(ii) With the Director no later than the effective date of regulatory provisions listing or designating wastes as hazardous in addition to those listed or designated previously, if the facility is treating storing or disposing of any of those newly listed or designated wastes; or

(iii) As necessary to comply with provisions of Section R315-270-72 for changes during interim status. Revised Part A applications necessary to comply with the provisions of Section R315-270-72 shall be filed with the Director.

(2) The owner or operator of a facility who fails to comply with the updating requirements of Subsection R315-270-10(g)(1) does not receive interim status as to the wastes not covered by duly filed part A applications.

(h) Reapplying for a permit. Owners and operators that have an effective permit and want to reapply for a new one, shall:

(1) Submit a new application at least 180 days before the expiration date of the effective permit, unless the Director allows a later date;

(2) The Director may not allow submittal of applications or Notices of Intent later than the expiration date of the existing permit, except as allowed by Subsection R315-270-51(e)(2).

(i) Recordkeeping. Applicants shall keep records of all data used to complete permit applications and any supplemental information submitted under Subsection R315-270-10(d) and Sections R315-270-13 through 21 for a period of at least 3 years from the date the application is signed.

(j) Exposure information.

(1) Any part B permit application submitted by an owner or operator of a facility that stores, treats, or disposes of hazardous waste in a surface impoundment or a landfill shall be accompanied by information, reasonably ascertainable by the owner or operator, on the potential for the public to be exposed to hazardous wastes or hazardous constituents through releases related to the unit. At a minimum, such information shall address:

(i) Reasonably foreseeable potential releases from both normal operations and accidents at the unit, including releases associated with transportation to or from the unit;

(ii) The potential pathways of human exposure to hazardous wastes or constituents resulting from the releases described under Subsection R315-270-10(j)(1)(i); and

(iii) The potential magnitude and nature of the human exposure resulting from such releases.

(2) Owners and operators of a landfill or a surface impoundment who have already submitted a part B application shall submit the exposure information required in Subsection R315-270-10(j)(1).

(k) The Director may require a permittee or an applicant to submit information in order to establish permit conditions under Sections R315-270-32(b)(2) and 50(d).

(l) If the Director concludes, based on one or more of the factors listed in Subsection R315-270-10(l)(1) that compliance with the standards of Subsection R307-214-2(39) which incorporates 40 CFR part 63, subpart EEE alone may not be protective of human health or the environment, the Director shall require the additional information or assessment(s) necessary to determine whether additional controls are necessary to ensure protection of human health and the environment. This includes information necessary to evaluate the potential risk to human health and/or the environment

resulting from both direct and indirect exposure pathways. The Director may also require a permittee or applicant to provide information necessary to determine whether such an assessment(s) should be required.

(1) The Director shall base the evaluation of whether compliance with the standards of Subsection R307-214-2(39) which incorporates 40 CFR part 63, subpart EEE alone is protective of human health or the environment on factors relevant to the potential risk from a hazardous waste combustion unit, including, as appropriate, any of the following factors:

(i) Particular site-specific considerations such as proximity to receptors, such as schools, hospitals, nursing homes, day care centers, parks, community activity centers, or other potentially sensitive receptors, unique dispersion patterns, etc.;

(ii) Identities and quantities of emissions of persistent, bioaccumulative or toxic pollutants considering enforceable controls in place to limit those pollutants;

(iii) Identities and quantities of nondioxin products of incomplete combustion most likely to be emitted and to pose significant risk based on known toxicities, confirmation of which should be made through emissions testing;

(iv) Identities and quantities of other off-site sources of pollutants in proximity of the facility that significantly influence interpretation of a facility-specific risk assessment;

(v) Presence of significant ecological considerations, such as the proximity of a particularly sensitive ecological area;

(vi) Volume and types of wastes, for example wastes containing highly toxic constituents;

(vii) Other on-site sources of hazardous air pollutants that significantly influence interpretation of the risk posed by the operation of the source in question;

(viii) Adequacy of any previously conducted risk assessment, given any subsequent changes in conditions likely to affect risk; and

(ix) Such other factors as may be appropriate.

R315-270-11. Hazardous Waste Permit Program -- Signatories to Permit Applications and Reports.

(a) Applications. All permit applications shall be signed as follows:

(1) For a corporation: By a principal executive officer of at least the level of vice-president;

(2) For a partnership or sole proprietorship; by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.

(b) Reports. All reports required by permits and other information requested by the Director shall be signed by a person described in Subsection R315-270-11(a), or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in Subsection R315-270-11(a);

(2) The authorization specifies either an individual or a position having responsibility for overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position; and

(3) The written authorization is submitted to the Director.

(c) Changes to authorization. If an authorization under Subsection R315-270-11(b) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Subsection R315-270-11(b) shall be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

(d)(1) Any person signing a document under Subsection R315-270-11(a) or (b) shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

(2) For remedial action plans (RAPs) under Sections R315-270-79 through 230, if the operator certifies according to Subsection R315-270-11(d)(1), then the owner may choose to make the following certification instead of the certification in Subsection R315-270-11(d)(1):

Based on my knowledge of the conditions of the property described in the RAP and my inquiry of the person or persons who manage the system referenced in the operator's certification, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

R315-270-12. Hazardous Waste Permit Program -- Confidentiality of Information.

(a) Any information provided to The Director under Rule R315-270 shall be made available to the public to the extent and in the manner authorized by Sections 63G-2-101 through 901.

(b) Any person who submits information to the Director in accordance with Rule R315-270 may assert a claim of business confidentiality covering part or all of that information by following the procedures set forth in Section 63G-2-309. Information covered by such a claim shall be disclosed by the Director only to the extent, and by means of the procedures, set forth Sections 63G-2-101 through 901. However, if no claim under Sections 63G-2-101 through 804 accompanies the information when it is received by the Director, it may be made available to the public without further notice to the person submitting it.

(c) Claims of confidentiality for the name and address of any permit applicant or permittee shall be denied.

R315-270-13. Hazardous Waste Permit Program -- Contents of Part a of the Permit Application.

Part A of the permit application shall be submitted to the Director and include the following information:

(a) The activities conducted by the applicant which require it to obtain a permit under Section 19-6-108.

(b) Name, mailing address, and location, including latitude and longitude of the facility for which the application is submitted.

(c) Up to four SIC codes which best reflect the principal products or services provided by the facility.

(d) The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public, or other entity.

(e) The name, address, and phone number of the owner of the facility.

(f) Whether the facility is located on Indian lands.

(g) An indication of whether the facility is new or existing and whether it is a first or revised application.

(h) For existing facilities,

(1) a scale drawing of the facility showing the location of all past, present, and future treatment, storage, and disposal

areas; and

(2) photographs of the facility clearly delineating all existing structures; existing treatment, storage, and disposal areas; and sites of future treatment, storage, and disposal areas.

(i) A description of the processes to be used for treating, storing, and disposing of hazardous waste, and the design capacity of these items.

(j) A specification of the hazardous wastes listed or designated under Rule R315-261 to be treated, stored, or disposed of at the facility, an estimate of the quantity of such wastes to be treated, stored, or disposed annually, and a general description of the processes to be used for such wastes.

(k) A listing of all permits or construction approvals received or applied for under any of the following programs:

(1) Hazardous Waste Management program under Sections 19-6-101 through 125 or under RCRA.

(2) UIC program under the SWDA.

(3) NPDES program under the CWA.

(4) Prevention of Significant Deterioration (PSD) program under the Clean Air Act.

(5) Nonattainment program under the Clean Air Act.

(6) National Emission Standards for Hazardous Pollutants (NESHAPS) preconstruction approval under the Clean Air Act.

(7) Reserved

(8) Dredge or fill permits under section 404 of the CWA.

(9) Other relevant environmental permits, including State permits.

(l) A topographic map, or other map if a topographic map is unavailable, extending one mile beyond the property boundaries of the source, depicting the facility and each of its intake and discharge structures; each of its hazardous waste treatment, storage, or disposal facilities; each well where fluids from the facility are injected underground; and those wells, springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within 1/4 mile of the facility property boundary.

(m) A brief description of the nature of the business.

(n) For hazardous debris, a description of the debris category(ies) and contaminant category(ies) to be treated, stored, or disposed of at the facility.

R315-270-14. Hazardous Waste Permit Program-- Contents of Part B: General Requirements.

(a) Part B of the permit application consists of the general information requirements of Section R315-270-14, and the specific information requirements in Section R315-270-14 through 29 applicable to the facility. The part B information requirements presented in Sections R315-270-14 through 29 reflect the standards promulgated in Rule R315-264. These information requirements are necessary in order for the Director to determine compliance with the Rule R315-264 standards. If owners and operators of hazardous waste management facilities can demonstrate that the information prescribed in part B cannot be provided to the extent required, the Director may make allowance for submission of such information on a case-by-case basis. Information required in part B shall be submitted to the Director and signed in accordance with the requirements in Section R315-270-11. Certain technical data, such as design drawings and specifications, and engineering studies shall be certified by a qualified Professional Engineer. For post-closure permits, only the information specified in Section R315-270-28 is required in part B of the permit application.

(b) General information requirements. The following information is required for all hazardous waste management facilities, except as Section R315-264-1 provides otherwise:

(1) A general description of the facility.

(2) Chemical and physical analyses of the hazardous waste and hazardous debris to be handled at the facility. At a minimum, these analyses shall contain all the information which

must be known to treat, store, or dispose of the wastes properly in accordance with Rule R315-264.

(3) A copy of the waste analysis plan required by Subsection R315-264-13(b) and, if applicable Subsection R315-264-13(c).

(4) A description of the security procedures and equipment required by Section R315-264-14, or a justification demonstrating the reasons for requesting a waiver of this requirement.

(5) A copy of the general inspection schedule required by Subsection R315-264-15(b). Include where applicable, as part of the inspection schedule, specific requirements in Section R315-264-174, Subsection R315-264-193(i), Sections R315-264-195, 226, 254, 273, 303, 602, 1033, 1052, 1053, 1058, 1084, 1085, 1086, and 1088.

(6) A justification of any request for a waiver(s) of the preparedness and prevention requirements of Sections R315-264-30 through 37.

(7) A copy of the contingency plan required by Section R315-264-50 through 56. Include, where applicable, as part of the contingency plan, specific requirements in Sections R315-264-227, 255, and 200.

(8) A description of procedures, structures, or equipment used at the facility to:

(i) Prevent hazards in unloading operations, for example, ramps, special forklifts;

(ii) Prevent runoff from hazardous waste handling areas to other areas of the facility or environment, or to prevent flooding, for example, berms, dikes, trenches;

(iii) Prevent contamination of water supplies;

(iv) Mitigate effects of equipment failure and power outages;

(v) Prevent undue exposure of personnel to hazardous waste, for example, protective clothing; and

(vi) Prevent releases to atmosphere.

(9) A description of precautions to prevent accidental ignition or reaction of ignitable, reactive, or incompatible wastes as required to demonstrate compliance with Section R315-264-17 including documentation demonstrating compliance with Subsection R315-264-17(c).

(10) Traffic pattern, estimated volume, number, types of vehicles, and control, for example, show turns across traffic lanes, and stacking lanes, if appropriate; describe access road surfacing and load bearing capacity; show traffic control signals.

(11) Facility location information;

(i) In order to determine the applicability of the seismic standard, Subsection R315-264-18(a), the owner or operator of a new facility shall identify the political jurisdiction, e.g., county, township, or election district, in which the facility is proposed to be located. If the county or election district is not listed in appendix VI of Rule R315-264, no further information is required to demonstrate compliance with Subsection R315-264-18(a).

(ii) If the facility is proposed to be located in an area listed in appendix VI of Rule R315-264, the owner or operator shall demonstrate compliance with the seismic standard. This demonstration may be made using either published geologic data or data obtained from field investigations carried out by the applicant. The information provided shall be of such quality to be acceptable to geologists experienced in identifying and evaluating seismic activity. The information submitted shall show that either:

(A) No faults which have had displacement in Holocene time are present, or no lineations which suggest the presence of a fault, which have displacement in Holocene time, within 3,000 feet of a facility are present, based on data from:

(1) Published geologic studies,

(2) Aerial reconnaissance of the area within a five-mile radius from the facility.

(3) An analysis of aerial photographs covering a 3,000 foot radius of the facility, and

(4) If needed to clarify the above data, a reconnaissance based on walking portions of the area within 3,000 feet of the facility, or

(B) If faults, to include lineations, which have had displacement in Holocene time are present within 3,000 feet of a facility, no faults pass within 200 feet of the portions of the facility where treatment, storage, or disposal of hazardous waste will be conducted, based on data from a comprehensive geologic analysis of the site. Unless a site analysis is otherwise conclusive concerning the absence of faults within 200 feet of such portions of the facility data shall be obtained from a subsurface exploration, trenching, of the area within a distance no less than 200 feet from portions of the facility where treatment, storage, or disposal of hazardous waste will be conducted. Such trenching shall be performed in a direction that is perpendicular to known faults, which have had displacement in Holocene time, passing within 3,000 feet of the portions of the facility where treatment, storage, or disposal of hazardous waste will be conducted. Such investigation shall document with supporting maps and other analyses, the location of faults found. The Guidance Manual for the Location Standards provides greater detail on the content of each type of seismic investigation and the appropriate conditions under which each approach or a combination of approaches would be used.

(iii) Owners and operators of all facilities shall provide an identification of whether the facility is located within a 100-year floodplain. This identification shall indicate the source of data for such determination and include a copy of the relevant Federal Insurance Administration (FIA) flood map, if used, or the calculations and maps used where an FIA map is not available. Information shall also be provided identifying the 100-year flood level and any other special flooding factors, e.g., wave action, which shall be considered in designing, constructing, operating, or maintaining the facility to withstand washout from a 100-year flood. Where maps for the National Flood Insurance Program produced by the Federal Insurance Administration of the Federal Emergency Management Agency are available, they will normally be determinative of whether a facility is located within or outside of the 100-year floodplain. However, where the FIA map excludes an area, usually areas of the floodplain less than 200 feet in width, these areas shall be considered and a determination made as to whether they are in the 100-year floodplain. Where FIA maps are not available for a proposed facility location, the owner or operator shall use equivalent mapping techniques to determine whether the facility is within the 100-year floodplain, and if so located, what the 100-year flood elevation would be.

(iv) Owners and operators of facilities located in the 100-year floodplain shall provide the following information:

(A) Engineering analysis to indicate the various hydrodynamic and hydrostatic forces expected to result at the site as consequence of a 100-year flood.

(B) Structural or other engineering studies showing the design of operational units, e.g., tanks, incinerators, and flood protection devices, e.g., floodwalls, dikes, at the facility and how these will prevent washout.

(C) If applicable, and in lieu of Subsections R315-270-14(b)(11)(iv)(A) and (B), a detailed description of procedures to be followed to remove hazardous waste to safety before the facility is flooded, including:

(I) Timing of such movement relative to flood levels, including estimated time to move the waste, to show that such movement can be completed before floodwaters reach the facility.

(II) A description of the location(s) to which the waste will be moved and demonstration that those facilities will be eligible

to receive hazardous waste in accordance with the regulations under Rules R315-270, 124, and 264 through 266.

(III) The planned procedures, equipment, and personnel to be used and the means to ensure that such resources will be available in time for use.

(IV) The potential for accidental discharges of the waste during movement.

(v) Existing facilities NOT in compliance with Subsection R315-264-18(b) shall provide a plan showing how the facility will be brought into compliance and a schedule for compliance.

(12) An outline of both the introductory and continuing training programs by owners or operators to prepare persons to operate or maintain the hazardous waste management facility in a safe manner as required to demonstrate compliance with Section R315-264-16. A brief description of how training will be designed to meet actual job tasks in accordance with requirements in Subsection R315-264-16(a)(3).

(13) A copy of the closure plan and, where applicable, the post-closure plan required by Sections R315-264-112, 118, and 197. Include, where applicable, as part of the plans, specific requirements in Sections R315-264-178, 197, 228, 258, 280, 310, 351, 601, and 603.

(14) For hazardous waste disposal units that have been closed, documentation that notices required under Section R315-264-119 have been filed.

(15) The most recent closure cost estimate for the facility prepared in accordance with Section R315-264-142 and a copy of the documentation required to demonstrate financial assurance under Section R315-264-143. For a new facility, a copy of the required documentation may be submitted 60 days prior to the initial receipt of hazardous wastes, if that is later than the submission of the part B.

(16) Where applicable, the most recent post-closure cost estimate for the facility prepared in accordance with Section R315-264-144 plus a copy of the documentation required to demonstrate financial assurance under Section R315-264-145. For a new facility, a copy of the required documentation may be submitted 60 days prior to the initial receipt of hazardous wastes, if that is later than the submission of the part B.

(17) Where applicable, a copy of the insurance policy or other documentation which comprises compliance with the requirements of Section R315-264-147. For a new facility, documentation showing the amount of insurance meeting the specification of Subsection R315-264-147(a) and, if applicable, Subsection R315-264-147(b), that the owner or operator plans to have in effect before initial receipt of hazardous waste for treatment, storage, or disposal. A request for a variance in the amount of required coverage, for a new or existing facility, may be submitted as specified in Subsection R315-264-147(c).

(18) Where appropriate, proof of coverage by a State financial mechanism in compliance with Section R315-264-149 or Section R315-264-150.

(19) A topographic map showing a distance of 1,000 feet around the facility at a scale of 2.5 centimeters, 1 inch, equal to not more than 61.0 meters, 200 feet. Contours shall be shown on the map. The contour interval shall be sufficient to clearly show the pattern of surface water flow in the vicinity of and from each operational unit of the facility. For example, contours with an interval of 1.5 meters, 5 feet, if relief is greater than 6.1 meters, 20 feet, or an interval of 0.6 meters, 2 feet, if relief is less than 6.1 meters, 20 feet. Owners and operators of hazardous waste management facilities located in mountainous areas should use large contour intervals to adequately show topographic profiles of facilities. The map shall clearly show the following:

(i) Map scale and date.

(ii) 100-year floodplain area.

(iii) Surface waters including intermittent streams.

(iv) Surrounding land uses, residential, commercial,

agricultural, recreational.

- (v) A wind rose, i.e., prevailing wind-speed and direction.
- (vi) Orientation of the map, north arrow.
- (vii) Legal boundaries of the hazardous waste management facility site.
- (viii) Access control, fences, gates.
- (ix) Injection and withdrawal wells both on-site and off-site.
- (x) Buildings; treatment, storage, or disposal operations; or other structure, recreation areas, runoff control systems, access and internal roads, storm, sanitary, and process sewerage systems, loading and unloading areas, fire control facilities, etc.
- (xi) Barriers for drainage or flood control.
- (xii) Location of operational units within the hazardous waste management facility site, where hazardous waste is, or will be, treated, stored, or disposed, include equipment cleanup areas. For large hazardous waste management facilities the Director may allow the use of other scales on a case-by-case basis.

(20) Applicants may be required to submit such information as may be necessary to enable the Director to carry out his duties under State and Federal laws.

(21) For land disposal facilities, if a case-by-case extension has been approved under Section R315-268-5 or a petition has been approved under Section R315-268-6, a copy of the notice of approval for the extension or petition is required.

(22) A summary of the pre-application meeting, along with a list of attendees and their addresses, and copies of any written comments or materials submitted at the meeting, as required under Subsection R315-124-31(c).

(c) Additional information requirements. The following additional information regarding protection of groundwater is required from owners or operators of hazardous waste facilities containing a regulated unit except as provided in Subsection R315-264-90(b):

(1) A summary of the ground-water monitoring data obtained during the interim status period under 40 CFR 265.90 through 94, which are adopted by reference, where applicable.

(2) Identification of the uppermost aquifer and aquifers hydraulically interconnected beneath the facility property, including ground-water flow direction and rate, and the basis for such identification, i.e., the information obtained from hydrogeologic investigations of the facility area.

(3) On the topographic map required under Subsection R315-270-14(b)(19), a delineation of the waste management area, the property boundary, the proposed "point of compliance" as defined under Section R315-264-95, the proposed location of ground-water monitoring wells as required under Section R315-264-97, and, to the extent possible, the information required in Subsection R315-270-14(c)(2).

(4) A description of any plume of contamination that has entered the ground water from a regulated unit at the time that the application was submitted that:

(i) Delineates the extent of the plume on the topographic map required under Subsection R315-270-14(b)(19);

(ii) Identifies the concentration of each appendix IX, of Rule R315-264, constituent throughout the plume or identifies the maximum concentrations of each appendix IX constituent in the plume.

(5) Detailed plans and an engineering report describing the proposed ground water monitoring program to be implemented to meet the requirements of Section R315-264-97.

(6) If the presence of hazardous constituents has not been detected in the ground water at the time of permit application, the owner or operator shall submit sufficient information, supporting data, and analyses to establish a detection monitoring program which meets the requirements of Section R315-264-98. This submission shall address the following items specified

under Section R315-264-98:

(i) A proposed list of indicator parameters, waste constituents, or reaction products that can provide a reliable indication of the presence of hazardous constituents in the ground water;

(ii) A proposed ground-water monitoring system;

(iii) Background values for each proposed monitoring parameter or constituent, or procedures to calculate such values; and

(iv) A description of proposed sampling, analysis and statistical comparison procedures to be utilized in evaluating ground-water monitoring data.

(7) If the presence of hazardous constituents has been detected in the ground water at the point of compliance at the time of the permit application, the owner or operator shall submit sufficient information, supporting data, and analyses to establish a compliance monitoring program which meets the requirements of Section R315-264-99. Except as provided in Subsection R315-264-98(h)(5), the owner or operator shall also submit an engineering feasibility plan for a corrective action program necessary to meet the requirements of Section R315-264-100, unless the owner or operator obtains written authorization in advance from the Director to submit a proposed permit schedule for submittal of such a plan. To demonstrate compliance with Section R315-264-99, the owner or operator shall address the following items:

(i) A description of the wastes previously handled at the facility;

(ii) A characterization of the contaminated ground water, including concentrations of hazardous constituents;

(iii) A list of hazardous constituents for which compliance monitoring will be undertaken in accordance with Sections R315-264-97 and 99;

(iv) Proposed concentration limits for each hazardous constituent, based on the criteria set forth in Subsection R315-264-94(a), including a justification for establishing any alternate concentration limits;

(v) Detailed plans and an engineering report describing the proposed ground-water monitoring system, in accordance with the requirements of Section R315-264-97; and

(vi) A description of proposed sampling, analysis and statistical comparison procedures to be utilized in evaluating ground-water monitoring data.

(8) If hazardous constituents have been measured in the ground water which exceed the concentration limits established under Section R315-264-94 Table 1, or if ground water monitoring conducted at the time of permit application under 40 CFR 265.90 through 94, which are adopted by reference, at the waste boundary indicates the presence of hazardous constituents from the facility in ground water over background concentrations, the owner or operator shall submit sufficient information, supporting data, and analyses to establish a corrective action program which meets the requirements of Section R315-264-100. However, an owner or operator is not required to submit information to establish a corrective action program if he demonstrates to the Director that alternate concentration limits will protect human health and the environment after considering the criteria listed in Subsection R315-264-94(b). An owner or operator who is not required to establish a corrective action program for this reason shall instead submit sufficient information to establish a compliance monitoring program which meets the requirements of Section R315-264-99 and Subsection R315-270-14(c)(6). To demonstrate compliance with Section R315-264-100, the owner or operator shall address, at a minimum, the following items:

(i) A characterization of the contaminated ground water, including concentrations of hazardous constituents;

(ii) The concentration limit for each hazardous constituent found in the ground water as set forth in Section R315-264-94;

(iii) Detailed plans and an engineering report describing the corrective action to be taken; and

(iv) A description of how the ground-water monitoring program will demonstrate the adequacy of the corrective action.

(v) The permit may contain a schedule for submittal of the information required in Subsections R315-270-14(c)(8)(iii) and (iv) provided the owner or operator obtains written authorization from the Director prior to submittal of the complete permit application.

(d) Information requirements for solid waste management units.

(1) The following information is required for each solid waste management unit at a facility seeking a permit:

(i) The location of the unit on the topographic map required under Subsection R315-270-14(b)(19).

(ii) Designation of type of unit.

(iii) General dimensions and structural description, supply any available drawings.

(iv) When the unit was operated.

(v) Specification of all wastes that have been managed at the unit, to the extent available.

(2) The owner or operator of any facility containing one or more solid waste management units shall submit all available information pertaining to any release of hazardous wastes or hazardous constituents from such unit or units.

(3) The owner/operator shall conduct and provide the results of sampling and analysis of groundwater, landsurface, and subsurface strata, surface water, or air, which may include the installation of wells, where the Director ascertains it is necessary to complete a Facility Assessment that will determine if a more complete investigation is necessary

R315-270-15. Hazardous Waste Permit Program -- Specific Part B Information Requirements for Containers.

Except as otherwise provided in Section R315-264-170, owners or operators of facilities that store containers of hazardous waste shall provide the following additional information:

(a) A description of the containment system to demonstrate compliance with Section R315-264-175. Show at least the following:

(1) Basic design parameters, dimensions, and materials of construction.

(2) How the design promotes drainage or how containers are kept from contact with standing liquids in the containment system.

(3) Capacity of the containment system relative to the number and volume of containers to be stored.

(4) Provisions for preventing or managing run-on.

(5) How accumulated liquids can be analyzed and removed to prevent overflow.

(b) For storage areas that store containers holding wastes that do not contain free liquids, a demonstration of compliance with Subsection R315-264-175(c), including:

(1) Test procedures and results or other documentation or information to show that the wastes do not contain free liquids; and

(2) A description of how the storage area is designed or operated to drain and remove liquids or how containers are kept from contact with standing liquids.

(c) Sketches, drawings, or data demonstrating compliance with Section R315-264-176, location of buffer zone and containers holding ignitable or reactive wastes, and Subsection R315-264-177(c), location of incompatible wastes, where applicable.

(d) Where incompatible wastes are stored or otherwise managed in containers, a description of the procedures used to ensure compliance with Subsections R315-264-177(a) and (b), and Subsections R315-264-17(b) and (c).

(e) Information on air emission control equipment as required in Section R315-270-27.

R315-270-16. Hazardous Waste Permit Program -- Specific Part B Information Requirements for Tank Systems.

Except as otherwise provided in Section R315-264-190, owners and operators of facilities that use tanks to store or treat hazardous waste shall provide the following additional information:

(a) A written assessment that is reviewed and certified by a qualified Professional Engineer as to the structural integrity and suitability for handling hazardous waste of each tank system, as required under Sections R315-264-191 and 192;

(b) Dimensions and capacity of each tank;

(c) Description of feed systems, safety cutoff, bypass systems, and pressure controls, e.g., vents;

(d) A diagram of piping, instrumentation, and process flow for each tank system;

(e) A description of materials and equipment used to provide external corrosion protection, as required under Subsection R315-264-192(a)(3)(ii);

(f) For new tank systems, a detailed description of how the tank system(s) will be installed in compliance with Subsections R315-264-192(b), (c), (d), and (e);

(g) Detailed plans and description of how the secondary containment system for each tank system is or will be designed, constructed, and operated to meet the requirements of Subsections R315-264-193(a), (b), (c), (d), (e), and (f);

(h) For tank systems for which a variance from the requirements of Section R315-264-193 is sought, as provided by Subsection R315-264-193(g):

(1) Detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous waste or hazardous constituents into the ground water or surface water during the life of the facility, or

(2) A detailed assessment of the substantial present or potential hazards posed to human health or the environment should a release enter the environment.

(i) Description of controls and practices to prevent spills and overflows, as required under Subsection R315-264-194(b); and

(j) For tank systems in which ignitable, reactive, or incompatible wastes are to be stored or treated, a description of how operating procedures and tank system and facility design will achieve compliance with the requirements of Sections R315-264-198 and 199.

(k) Information on air emission control equipment as required in Section R315-270-27.

R315-270-17. Hazardous Waste Permit Program -- Specific Part B Information Requirements for Surface Impoundments.

Except as otherwise provided in Section R315-264-1, owners and operators of facilities that store, treat or dispose of hazardous waste in surface impoundments shall provide the following additional information:

(a) A list of the hazardous wastes placed or to be placed in each surface impoundment;

(b) Detailed plans and an engineering report describing how the surface impoundment is designed and is or will be constructed, operated, and maintained to meet the requirements of Section R315-264-19 and Sections R315-264-221 through 223, addressing the following items:

(1) The liner system, except for an existing portion of a surface impoundment. If an exemption from the requirement for a liner is sought as provided by Subsection R315-264-221(b), submit detailed plans and engineering and hydrogeologic

reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time;

(2) The double liner and leak, leachate, detection, collection, and removal system, if the surface impoundment shall meet the requirements of Subsection R315-264-221(c). If an exemption from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by Subsections R315-264-221(d), (e), or (f), submit appropriate information;

(3) If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system;

(4) The construction quality assurance (CQA) plan if required under Section R315-264-19;

(5) Proposed action leakage rate, with rationale, if required under Section R315-264-222, and response action plan, if required under Section R315-264-223;

(6) Prevention of overtopping; and

(7) Structural integrity of dikes;

(c) A description of how each surface impoundment, including the double liner system, leak detection system, cover system, and appurtenances for control of overtopping, will be inspected in order to meet the requirements of Subsections R315-264-226(a), (b), and (d). This information shall be included in the inspection plan submitted under Subsection R315-270-14(b)(5);

(d) A certification by a qualified engineer which attests to the structural integrity of each dike, as required under Subsection R315-264-226(c). For new units, the owner or operator shall submit a statement by a qualified engineer that he will provide such a certification upon completion of construction in accordance with the plans and specifications;

(e) A description of the procedure to be used for removing a surface impoundment from service, as required under Subsections R315-264-227(b) and (c). This information should be included in the contingency plan submitted under Subsection R315-270-14(b)(7);

(f) A description of how hazardous waste residues and contaminated materials will be removed from the unit at closure, as required under Subsection R315-264-228(a)(1). For any wastes not to be removed from the unit upon closure, the owner or operator shall submit detailed plans and an engineering report describing how Subsections R315-264-228(a)(2) and (b) will be complied with. This information should be included in the closure plan and, where applicable, the post-closure plan submitted under Subsection R315-270-14(b)(13);

(g) If ignitable or reactive wastes are to be placed in a surface impoundment, an explanation of how Section R315-264-229 will be complied with;

(h) If incompatible wastes, or incompatible wastes and materials will be placed in a surface impoundment, an explanation of how Section R315-264-230 will be complied with.

(i) A waste management plan for EPA Hazardous Waste Nos. FO20, FO21, FO22, FO23, FO26, and FO27 describing how the surface impoundment is or will be designed, constructed, operated, and maintained to meet the requirements of Section R315-264-231. This submission shall address the following items as specified in Section R315-264-231:

(1) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

(2) The attenuative properties of underlying and surrounding soils or other materials;

(3) The mobilizing properties of other materials co-disposed with these wastes; and

(4) The effectiveness of additional treatment, design, or monitoring techniques.

(j) Information on air emission control equipment as required in Section R315-270-27.

R315-270-18. Hazardous Waste Permit Program -- Specific Part B Information Requirements for Waste Piles.

Except as otherwise provided in Section R315-264-1, owners and operators of facilities that store or treat hazardous waste in waste piles shall provide the following additional information:

(a) A list of hazardous wastes placed or to be placed in each waste pile;

(b) If an exemption is sought to Section R315-264-251 and Sections R315-264-90 through 101 as provided by Subsection R315-264-250(c) or Subsection R315-264-90(b)(2), an explanation of how the standards of Subsection R315-264-250(c) will be complied with or detailed plans and an engineering report describing how the requirements of Subsection R315-264-90(b)(2) will be met.

(c) Detailed plans and an engineering report describing how the waste pile is designed and is or will be constructed, operated, and maintained to meet the requirements of Sections R315-264-19 and R315-264-251 through 253, addressing the following items:

(1)(i) The liner system, except for an existing portion of a waste pile, if the waste pile shall meet the requirements of Subsection R315-264-251(a). If an exemption from the requirement for a liner is sought as provided by Subsection R315-264-251(b), submit detailed plans, and engineering and hydrogeological reports, as appropriate, describing alternate designs and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time;

(ii) The double liner and leak, leachate, detection; collection; and removal system, if the waste pile shall meet the requirements of Subsections R315-264-251(c). If an exemption from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by Subsections R315-264-251(d), (e), or (f), submit appropriate information;

(iii) If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system;

(iv) The construction quality assurance (CQA) plan if required under Section R315-264-19;

(v) Proposed action leakage rate, with rationale, if required under Section R315-264-252, and response action plan, if required under Section R315-264-253;

(2) Control of run-on;

(3) Control of run-off;

(4) Management of collection and holding units associated with run-on and run-off control systems; and

(5) Control of wind dispersal of particulate matter, where applicable;

(d) A description of how each waste pile, including the double liner system, leachate collection and removal system, leak detection system, cover system, and appurtenances for control of run-on and run-off, will be inspected in order to meet the requirements of Subsections R315-264-254(a), (b), and (c). This information shall be included in the inspection plan submitted under Subsection R315-270-14(b)(5);

(e) If treatment is carried out on or in the pile, details of the process and equipment used, and the nature and quality of the residuals;

(f) If ignitable or reactive wastes are to be placed in a waste pile, an explanation of how the requirements of Section

R315-264-256 will be complied with;

(g) If incompatible wastes, or incompatible wastes and materials will be placed in a waste pile, an explanation of how Section R315-264-257 will be complied with;

(h) A description of how hazardous waste residues and contaminated materials will be removed from the waste pile at closure, as required under Subsection R315-264-258(a). For any waste not to be removed from the waste pile upon closure, the owner or operator shall submit detailed plans and an engineering report describing how Subsections R315-264-310(a) and (b) will be complied with. This information should be included in the closure plan and, where applicable, the post-closure plan submitted under Subsection R315-270-14(b)(13).

(i) A waste management plan for EPA Hazardous Waste Nos. FO20, FO21, FO22, FO23, FO26, and FO27 describing how a waste pile that is not enclosed, as defined in Section R315-264-250(c), is or will be designed, constructed, operated, and maintained to meet the requirements of Section R315-264-259. This submission shall address the following items as specified in Section R315-264-259:

(1) The volume, physical, and chemical characteristics of the wastes to be disposed in the waste pile, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

(2) The attenuative properties of underlying and surrounding soils or other materials;

(3) The mobilizing properties of other materials co-disposed with these wastes; and

(4) The effectiveness of additional treatment, design, or monitoring techniques.

R315-270-19. Hazardous Waste Permit Program -- Specific Part B Information Requirements for Incinerators.

Except as Subsection R315-264-340 and Subsection R315-270-19(e) provide otherwise, owners and operators of facilities that incinerate hazardous waste shall fulfill the requirements of Subsection R315-270-19(a), (b), or (c).

(a) When seeking an exemption under Subsection R315-264-340 (b) or (c), Ignitable, corrosive, or reactive wastes only:

(1) Documentation that the waste is listed as a hazardous waste in Sections R315-261-30 through 35 solely because it is ignitable, Hazard Code I, or corrosive, Hazard Code C, or both; or

(2) Documentation that the waste is listed as a hazardous waste in Sections R315-261-30 through 35 solely because it is reactive, Hazard Code R, for characteristics other than those listed in Subsection R315-261-23(a)(4) and (5), and will not be burned when other hazardous wastes are present in the combustion zone; or

(3) Documentation that the waste is a hazardous waste solely because it possesses the characteristic of ignitability, corrosivity, or both, as determined by the tests for characteristics of hazardous waste under Sections R315-261-20 through 24; or

(4) Documentation that the waste is a hazardous waste solely because it possesses the reactivity characteristics listed in Subsections R315-261-23(a)(1), (2), (3), (6), (7), or (8), and that it will not be burned when other hazardous wastes are present in the combustion zone; or

(b) Submit a trial burn plan or the results of a trial burn, including all required determinations, in accordance with Section R315-270-62; or

(c) In lieu of a trial burn, the applicant may submit the following information:

(1) An analysis of each waste or mixture of wastes to be burned including:

(i) Heat value of the waste in the form and composition in which it will be burned.

(ii) Viscosity, if applicable, or description of physical form of the waste.

(iii) An identification of any hazardous organic constituents listed in Rule R315-261, appendix VIII, which are present in the waste to be burned, except that the applicant need not analyze for constituents listed in Rule R315-261, appendix VIII, which would reasonably not be expected to be found in the waste. The constituents excluded from analysis shall be identified and the basis for their exclusion stated. The waste analysis shall rely on appropriate analytical techniques.

(iv) An approximate quantification of the hazardous constituents identified in the waste, within the precision produced by appropriate analytical methods.

(v) A quantification of those hazardous constituents in the waste which may be designated as POHC's based on data submitted from other trial or operational burns which demonstrate compliance with the performance standards in Section R315-264-343.

(2) A detailed engineering description of the incinerator, including:

(i) Manufacturer's name and model number of incinerator.

(ii) Type of incinerator.

(iii) Linear dimension of incinerator unit including cross sectional area of combustion chamber.

(iv) Description of auxiliary fuel system, type/feed.

(v) Capacity of prime mover.

(vi) Description of automatic waste feed cutoff system(s).

(vii) Stack gas monitoring and pollution control monitoring system.

(viii) Nozzle and burner design.

(ix) Construction materials.

(x) Location and description of temperature, pressure, and flow indicating devices and control devices.

(3) A description and analysis of the waste to be burned compared with the waste for which data from operational or trial burns are provided to support the contention that a trial burn is not needed. The data should include those items listed in Subsection R315-270-19(c)(1). This analysis should specify the POHC's which the applicant has identified in the waste for which a permit is sought, and any differences from the POHC's in the waste for which burn data are provided.

(4) The design and operating conditions of the incinerator unit to be used, compared with that for which comparative burn data are available.

(5) A description of the results submitted from any previously conducted trial burn(s) including:

(i) Sampling and analysis techniques used to calculate performance standards in Section R315-264-343,

(ii) Methods and results of monitoring temperatures, waste feed rates, carbon monoxide, and an appropriate indicator of combustion gas velocity, including a statement concerning the precision and accuracy of this measurement,

(6) The expected incinerator operation information to demonstrate compliance with Sections R315-264-343 and 345 including:

(i) Expected carbon monoxide (CO) level in the stack exhaust gas.

(ii) Waste feed rate.

(iii) Combustion zone temperature.

(iv) Indication of combustion gas velocity.

(v) Expected stack gas volume, flow rate, and temperature.

(vi) Computed residence time for waste in the combustion zone.

(vii) Expected hydrochloric acid removal efficiency.

(viii) Expected fugitive emissions and their control procedures.

(ix) Proposed waste feed cut-off limits based on the identified significant operating parameters.

(7) Such supplemental information as the Director finds necessary to achieve the purposes of Subsection R315-270-19(c).

(8) Waste analysis data, including that submitted in Subsection R315-270-19(c)(1), sufficient to allow the Director to specify as permit Principal Organic Hazardous Constituents, permit POHC's, those constituents for which destruction and removal efficiencies will be required.

(d) The Director shall approve a permit application without a trial burn if he finds that:

(1) The wastes are sufficiently similar; and

(2) The incinerator units are sufficiently similar, and the data from other trial burns are adequate to specify, under Section R315-264-345, operating conditions that will ensure that the performance standards in Section R315-264-343 shall be met by the incinerator.

(e) When an owner or operator of a hazardous waste incineration unit becomes subject to permit requirements after October 12, 2005, or when an owner or operator of an existing hazardous waste incineration unit demonstrates compliance with the air emission standards and limitations in Subsection R307-214-2(39) which incorporates 40 CFR part 63, subpart EEE, i.e., by conducting a comprehensive performance test and submitting a Notification of Compliance under 40 CFR 63.1207(j) and 63.1210(d) documenting compliance with all applicable requirements of Subsection R307-214-2(39) which incorporates 40 CFR part 63, subpart EEE, the requirements of Section R315-270-19 do not apply, except those provisions the Director determines are necessary to ensure compliance with Subsections R315-264-345(a) and (c) if the owner or operator elect to comply with Subsection R315-270-235(a)(1)(i) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. Nevertheless, the Director may apply the provisions of Section R315-270-19, on a case-by-case basis, for purposes of information collection in accordance with Subsections R315-270-10(k) and (l), R315-270-32(b)(2), and (b)(3).

R315-270-20. Hazardous Waste Permit Program -- Specific Part B Information Requirements for Land Treatment Facilities.

Except as otherwise provided in Section R315-264-1, owners and operators of facilities that use land treatment to dispose of hazardous waste shall provide the following additional information:

(a) A description of plans to conduct a treatment demonstration as required under Section R315-264-272. The description shall include the following information;

(1) The wastes for which the demonstration will be made and the potential hazardous constituents in the waste;

(2) The data sources to be used to make the demonstration, e.g., literature, laboratory data, field data, or operating data;

(3) Any specific laboratory or field test that will be conducted, including:

(i) The type of test, e.g., column leaching, degradation;

(ii) Materials and methods, including analytical procedures;

(iii) Expected time for completion;

(iv) Characteristics of the unit that will be simulated in the demonstration, including treatment zone characteristics, climatic conditions, and operating practices.

(b) A description of a land treatment program, as required under Section R315-264-271. This information shall be submitted with the plans for the treatment demonstration, and updated following the treatment demonstration. The land treatment program shall address the following items:

(1) The wastes to be land treated;

(2) Design measures and operating practices necessary to maximize treatment in accordance with Subsection R315-264-273(a) including:

(i) Waste application method and rate;

(ii) Measures to control soil pH;

(iii) Enhancement of microbial or chemical reactions;

(iv) Control of moisture content;

(3) Provisions for unsaturated zone monitoring, including:

(i) Sampling equipment, procedures, and frequency;

(ii) Procedures for selecting sampling locations;

(iii) Analytical procedures;

(iv) Chain of custody control;

(v) Procedures for establishing background values;

(vi) Statistical methods for interpreting results;

(vii) The justification for any hazardous constituents recommended for selection as principal hazardous constituents, in accordance with the criteria for such selection in Subsection R315-264-278(a);

(4) A list of hazardous constituents reasonably expected to be in, or derived from, the wastes to be land treated based on waste analysis performed pursuant to Section R315-264-13;

(5) The proposed dimensions of the treatment zone;

(c) A description of how the unit is or will be designed, constructed, operated, and maintained in order to meet the requirements of Section R315-264-273. This submission shall address the following items:

(1) Control of run-on;

(2) Collection and control of run-off;

(3) Minimization of run-off of hazardous constituents from the treatment zone;

(4) Management of collection and holding facilities associated with run-on and run-off control systems;

(5) Periodic inspection of the unit. This information should be included in the inspection plan submitted under Subsection R315-270-14(b)(5);

(6) Control of wind dispersal of particulate matter, if applicable;

(d) If food-chain crops are to be grown in or on the treatment zone of the land treatment unit, a description of how the demonstration required under Subsection R315-264-276(a) will be conducted including:

(1) Characteristics of the food-chain crop for which the demonstration will be made.

(2) Characteristics of the waste, treatment zone, and waste application method and rate to be used in the demonstration;

(3) Procedures for crop growth, sample collection, sample analysis, and data evaluation;

(4) Characteristics of the comparison crop including the location and conditions under which it was or will be grown;

(e) If food-chain crops are to be grown, and cadmium is present in the land-treated waste, a description of how the requirements of Subsection R315-264-276(b) will be complied with;

(f) A description of the vegetative cover to be applied to closed portions of the facility, and a plan for maintaining such cover during the post-closure care period, as required under Subsections R315-264-280(a)(8) and R315-264-280(c)(2). This information should be included in the closure plan and, where applicable, the post-closure care plan submitted under Subsection R315-270-14(b)(13);

(g) If ignitable or reactive wastes will be placed in or on the treatment zone, an explanation of how the requirements of Section R315-264-281 will be complied with;

(h) If incompatible wastes, or incompatible wastes and materials, will be placed in or on the same treatment zone, an explanation of how Section R315-264-282 will be complied with.

(i) A waste management plan for EPA Hazardous Waste Nos. FO20, FO21, FO22, FO23, FO26, and FO27 describing how a land treatment facility is or will be designed, constructed, operated, and maintained to meet the requirements of Section R315-264-283. This submission shall address the following items as specified in Section R315-264-283:

(1) The volume, physical, and chemical characteristics of

the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

(2) The attenuative properties of underlying and surrounding soils or other materials;

(3) The mobilizing properties of other materials co-disposed with these wastes; and

(4) The effectiveness of additional treatment, design, or monitoring techniques.

R315-270-21. Hazardous Waste Permit Program -- Specific Part B Information Requirements for Landfills.

Except as otherwise provided in Section R315-264-1, owners and operators of facilities that dispose of hazardous waste in landfills shall provide the following additional information:

(a) A list of the hazardous wastes placed or to be placed in each landfill or landfill cell;

(b) Detailed plans and an engineering report describing how the landfill is designed and is or will be constructed, operated, and maintained to meet the requirements of Sections R315-264-19 and Sections R315-264-301 through 303, addressing the following items:

(1)(i) The liner system, except for an existing portion of a landfill, if the landfill shall meet the requirements of Subsection R315-264-301(a). If an exemption from the requirement for a liner is sought as provided by Subsection R315-264-301(b), submit detailed plans, and engineering and hydrogeological reports, as appropriate, describing alternate designs and operating practices that shall, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time;

(ii) The double liner and leak, leachate; detection; collection; and removal system; if the landfill shall meet the requirements of Subsection R315-264-301(c). If an exemption from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by Subsection R315-264-301(d), (e), or (f), submit appropriate information;

(iii) If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system;

(iv) The construction quality assurance (CQA) plan if required under Section R315-264-19;

(v) Proposed action leakage rate, with rationale, if required under Section R315-264-302, and response action plan, if required under Section R315-264-303;

(2) Control of run-on;

(3) Control of run-off;

(4) Management of collection and holding facilities associated with run-on and run-off control systems; and

(5) Control of wind dispersal of particulate matter, where applicable;

(c) A description of how each landfill, including the double liner system, leachate collection and removal system, leak detection system, cover system, and appurtenances for control of run-on and run-off, will be inspected in order to meet the requirements of Subsections R315-264-303(a), (b), and (c). This information shall be included in the inspection plan submitted under Subsection R315-270-14(b)(5);

(d) A description of how each landfill, including the liner and cover systems, will be inspected in order to meet the requirements of Subsections R315-264-303(a) and (b). This information should be included in the inspection plan submitted under Subsection R315-270-14(b)(5).

(e) Detailed plans and an engineering report describing the final cover which will be applied to each landfill or landfill cell at closure in accordance with Subsection R315-264-310(a), and a description of how each landfill will be maintained and

monitored after closure in accordance with Subsection R315-264-310(b). This information should be included in the closure and post-closure plans submitted under Subsection R315-270-14(b)(13).

(f) If ignitable or reactive wastes will be landfilled, an explanation of how the standards of Section R315-264-312 will be complied with;

(g) If incompatible wastes, or incompatible wastes and materials will be landfilled, an explanation of how Section R315-264-313 will be complied with;

(h) If bulk or non-containerized liquid waste or wastes containing free liquids is to be landfilled prior to May 8, 1985, an explanation of how the requirements of Subsection R315-264-314(a) will be complied with;

(i) If containers of hazardous waste are to be landfilled, an explanation of how the requirements of Section R315-264-315 or Section R315-264-316, as applicable, will be complied with.

(j) A waste management plan for EPA Hazardous Waste Nos. FO20, FO21, FO22, FO23, FO26, and FO27 describing how a landfill is or will be designed, constructed, operated, and maintained to meet the requirements of Section R315-264-317. This submission shall address the following items as specified in Section R315-264-317:

(1) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

(2) The attenuative properties of underlying and surrounding soils or other materials;

(3) The mobilizing properties of other materials co-disposed with these wastes; and

(4) The effectiveness of additional treatment, design, or monitoring techniques.

R315-270-22. Hazardous Waste Permit Program Specific Part B Information Requirements for Boilers and Industrial Furnaces Burning Hazardous Waste.

When an owner or operator of a cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace becomes subject to Section 19-6-108 permit requirements after October 12, 2005, or when an owner or operator of an existing cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace demonstrates compliance with the air emission standards and limitations in 40 CFR 63, subpart EEE, i.e., by conducting a comprehensive performance test and submitting a Notification of Compliance under 40 CFR 63.1207(j) and 63.1210(d) documenting compliance with all applicable requirements of Subsection R307-214-2(39) which incorporates 40 CFR part 63, subpart EEE, the requirements of Section R315-270-22 do not apply. The requirements of Section R315-270-22 do apply, however, if the Director determines certain provisions are necessary to ensure compliance with Subsections R315-266-102(e)(1) and (e)(2)(iii) if the owner or operator elects to comply with Subsection R315-270-235(a)(1)(i) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events; or if the facility is an area source and the owner or operator elects to comply with the Sections R315-266-105 through 107 standards and associated requirements for particulate matter, hydrogen chloride and chlorine gas, and non-mercury metals; or the Director determines certain provisions apply, on a case-by-case basis, for purposes of information collection in accordance with Subsections R315-270-10(k), R315-270-10(l), and Subsections R315-270-32(b)(2), and 32(b)(3).

(a) Trial burns

(1) General. Except as provided below, owners and operators that are subject to the standards to control organic emissions provided by Section R315-266-104, standards to

control particulate matter provided by Section R315-266-105, standards to control metals emissions provided by Section R315-266-106, or standards to control hydrogen chloride or chlorine gas emissions provided by Section R315-266-107 shall conduct a trial burn to demonstrate conformance with those standards and shall submit a trial burn plan or the results of a trial burn, including all required determinations, in accordance with Section R315-270-66.

(i) A trial burn to demonstrate conformance with a particular emission standard may be waived under provisions of Sections R315-266-104 through 107 and Subsections R315-270-22(a)(2) through (a)(5); and

(ii) The owner or operator may submit data in lieu of a trial burn, as prescribed in Subsection R315-270-22 (a)(6).

(2) Waiver of trial burn for DRE

(i) Boilers operated under special operating requirements. When seeking to be permitted under Subsections R315-266-104(a)(4) and R315-266-110 that automatically waive the DRE trial burn, the owner or operator of a boiler shall submit documentation that the boiler operates under the special operating requirements provided by Section R315-266-110.

(ii) Boilers and industrial furnaces burning low risk waste. When seeking to be permitted under the provisions for low risk waste provided by Subsections R315-266-104(a)(5) and R315-266-109(a) that waive the DRE trial burn, the owner or operator shall submit:

(A) Documentation that the device is operated in conformance with the requirements of Subsection R315-266-109(a)(1).

(B) Results of analyses of each waste to be burned, documenting the concentrations of nonmetal compounds listed in appendix VIII of Rule R315-261, except for those constituents that would reasonably not be expected to be in the waste. The constituents excluded from analysis shall be identified and the basis for their exclusion explained. The analysis shall rely on appropriate analytical techniques.

(C) Documentation of hazardous waste firing rates and calculations of reasonable, worst-case emission rates of each constituent identified in Subsection R315-270-22(a)(2)(ii)(B) using procedures provided by Subsection R315-266-109(a)(2)(ii).

(D) Results of emissions dispersion modeling for emissions identified in Subsection R315-270-22(a)(2)(ii)(C) using modeling procedures prescribed by Subsection R315-266-106(h). The Director shall review the emission modeling conducted by the applicant to determine conformance with these procedures. The Director shall either approve the modeling or determine that alternate or supplementary modeling is appropriate.

(E) Documentation that the maximum annual average ground level concentration of each constituent identified in Subsection R315-270-22(a)(2)(ii)(B) quantified in conformance with Subsection R315-270-22(a)(2)(ii)(D) does not exceed the allowable ambient level established in appendices IV or V of Rule R315-266. The acceptable ambient concentration for emitted constituents for which a specific Reference Air Concentration has not been established in appendix IV or Risk-Specific Dose has not been established in appendix V is 0.1 micrograms per cubic meter, as noted in the footnote to appendix IV.

(3) Waiver of trial burn for metals. When seeking to be permitted under the Tier I, or adjusted Tier I, metals feed rate screening limits provided by Subsections R315-266-106 (b) and (e) that control metals emissions without requiring a trial burn, the owner or operator shall submit:

(i) Documentation of the feed rate of hazardous waste, other fuels, and industrial furnace feed stocks;

(ii) Documentation of the concentration of each metal controlled by Subsection R315-266-106(b) or (e) in the

hazardous waste, other fuels, and industrial furnace feedstocks, and calculations of the total feed rate of each metal;

(iii) Documentation of how the applicant shall ensure that the Tier I feed rate screening limits provided by Subsection R315-266-106(b) or (e) shall not be exceeded during the averaging period provided by Subsection R315-266-106(b) or (e);

(iv) Documentation to support the determination of the terrain-adjusted effective stack height, good engineering practice stack height, terrain type, and land use as provided by Subsections R315-266-106(b)(3) through (b)(5);

(v) Documentation of compliance with the provisions of Subsection R315-266-106(b)(6), if applicable, for facilities with multiple stacks;

(vi) Documentation that the facility does not fail the criteria provided by Subsection R315-266-106(b)(7) for eligibility to comply with the screening limits; and

(vii) Proposed sampling and metals analysis plan for the hazardous waste, other fuels, and industrial furnace feed stocks.

(4) Waiver of trial burn for particulate matter. When seeking to be permitted under the low risk waste provisions of Subsection R315-266-109(b) which waives the particulate standard, and trial burn to demonstrate conformance with the particulate standard, applicants shall submit documentation supporting conformance with Subsections R315-270-22(a)(2)(ii) and (a)(3).

(5) Waiver of trial burn for HCl and Cl₂. When seeking to be permitted under the Tier I, or adjusted Tier I, feed rate screening limits for total chloride and chlorine provided by Subsections R315-266-107(b)(1) and (e) that control emissions of hydrogen chloride (HCl) and chlorine gas (Cl₂) without requiring a trial burn, the owner or operator shall submit:

(i) Documentation of the feed rate of hazardous waste, other fuels, and industrial furnace feed stocks;

(ii) Documentation of the levels of total chloride and chlorine in the hazardous waste, other fuels, and industrial furnace feedstocks, and calculations of the total feed rate of total chloride and chlorine;

(iii) Documentation of how the applicant shall ensure that the Tier I, or adjusted Tier I, feed rate screening limits provided by Subsection R315-266-107(b)(1) or (e) shall not be exceeded during the averaging period provided by Subsection R315-266-107(b)(1) or (e);

(iv) Documentation to support the determination of the terrain-adjusted effective stack height, good engineering practice stack height, terrain type, and land use as provided by Subsection R315-266-107(b)(3);

(v) Documentation of compliance with the provisions of Subsection R315-266-107(b)(4), if applicable, for facilities with multiple stacks;

(vi) Documentation that the facility does not fail the criteria provided by Subsection R315-266-107(b)(3) for eligibility to comply with the screening limits; and

(vii) Proposed sampling and analysis plan for total chloride and chlorine for the hazardous waste, other fuels, and industrial furnace feedstocks.

(6) Data in lieu of trial burn. The owner or operator may seek an exemption from the trial burn requirements to demonstrate conformance with Sections R315-266-104 through 107 and Section R315-270-66 by providing the information required by Section R315-270-66 from previous compliance testing of the device in conformance with Subsection R315-266-103, or from compliance testing or trial or operational burns of similar boilers or industrial furnaces burning similar hazardous wastes under similar conditions. If data from a similar device is used to support a trial burn waiver, the design and operating information required by Section R315-270-66 shall be provided for both the similar device and the device to which the data is to be applied, and a comparison of the design and operating

information shall be provided. The Director shall approve a permit application without a trial burn if he finds that the hazardous wastes are sufficiently similar, the devices are sufficiently similar, the operating conditions are sufficiently similar, and the data from other compliance tests, trial burns, or operational burns are adequate to specify, under Section R315-266-102, operating conditions that shall ensure conformance with Subsection R315-266-102(c). In addition, the following information shall be submitted:

(i) For a waiver from any trial burn:

(A) A description and analysis of the hazardous waste to be burned compared with the hazardous waste for which data from compliance testing, or operational or trial burns are provided to support the contention that a trial burn is not needed;

(B) The design and operating conditions of the boiler or industrial furnace to be used, compared with that for which comparative burn data are available; and

(C) Such supplemental information as the Director finds necessary to achieve the purposes of Subsection R315-270-22(a).

(ii) For a waiver of the DRE trial burn, the basis for selection of POHCs used in the other trial or operational burns which demonstrate compliance with the DRE performance standard in Subsection R315-266-104(a). This analysis should specify the constituents in appendix VIII, Rule R315-261, that the applicant has identified in the hazardous waste for which a permit is sought, and any differences from the POHCs in the hazardous waste for which burn data are provided.

(b) Alternative HC limit for industrial furnaces with organic matter in raw materials. Owners and operators of industrial furnaces requesting an alternative HC limit under Subsection R315-266-104(f) shall submit the following information at a minimum:

(1) Documentation that the furnace is designed and operated to minimize HC emissions from fuels and raw materials;

(2) Documentation of the proposed baseline flue gas HC, and CO, concentration, including data on HC, and CO, levels during tests when the facility produced normal products under normal operating conditions from normal raw materials while burning normal fuels and when not burning hazardous waste;

(3) Test burn protocol to confirm the baseline HC, and CO, level including information on the type and flow rate of all feedstreams, point of introduction of all feedstreams, total organic carbon content, or other appropriate measure of organic content, of all nonfuel feedstreams, and operating conditions that affect combustion of fuel(s) and destruction of hydrocarbon emissions from nonfuel sources;

(4) Trial burn plan to:

(i) Demonstrate that flue gas HC, and CO, concentrations when burning hazardous waste do not exceed the baseline HC, and CO, level; and

(ii) Identify the types and concentrations of organic compounds listed in appendix VIII, Rule R315-261, that are emitted when burning hazardous waste in conformance with procedures prescribed by the Director;

(5) Implementation plan to monitor over time changes in the operation of the facility that could reduce the baseline HC level and procedures to periodically confirm the baseline HC level; and

(6) Such other information as the Director finds necessary to achieve the purposes of Subsection R315-270-22(b).

(c) Alternative metals implementation approach. When seeking to be permitted under an alternative metals implementation approach under Subsection R315-266-106(f), the owner or operator shall submit documentation specifying how the approach ensures compliance with the metals emissions standards of Subsection R315-266-106(c) or (d) and how the

approach can be effectively implemented and monitored. Further, the owner or operator shall provide such other information that the Director finds necessary to achieve the purposes of Subsection R315-270-22(b).

(d) Automatic waste feed cutoff system. Owners and operators shall submit information describing the automatic waste feed cutoff system, including any pre-alarm systems that may be used.

(e) Direct transfer. Owners and operators that use direct transfer operations to feed hazardous waste from transport vehicles, containers, as defined in Section R315-266-111, directly to the boiler or industrial furnace shall submit information supporting conformance with the standards for direct transfer provided by Section R315-266-111.

(f) Residues. Owners and operators that claim that their residues are excluded from regulation under the provisions of Section R315-266-112 shall submit information adequate to demonstrate conformance with those provisions.

R315-270-23. Hazardous Waste Permit Program -- Specific Part B Information Requirements for Miscellaneous Units.

Except as otherwise provided in Section R315-264-600, owners and operators of facilities that treat, store, or dispose of hazardous waste in miscellaneous units shall provide the following additional information:

(a) A detailed description of the unit being used or proposed for use, including the following:

(1) Physical characteristics, materials of construction, and dimensions of the unit;

(2) Detailed plans and engineering reports describing how the unit will be located, designed, constructed, operated, maintained, monitored, inspected, and closed to comply with the requirements of Sections R315-264-601 and 602; and

(3) For disposal units, a detailed description of the plans to comply with the post-closure requirements of Section R315-264-603.

(b) Detailed hydrologic, geologic, and meteorologic assessments and land-use maps for the region surrounding the site that address and ensure compliance of the unit with each factor in the environmental performance standards of Section R315-264-601. If the applicant can demonstrate that he does not violate the environmental performance standards of Section R315-264-601 and the Director agrees with such demonstration, preliminary hydrologic, geologic, and meteorologic assessments will suffice.

(c) Information on the potential pathways of exposure of humans or environmental receptors to hazardous waste or hazardous constituents and on the potential magnitude and nature of such exposures.

(d) For any treatment unit, a report on a demonstration of the effectiveness of the treatment based on laboratory or field data.

(e) Any additional information determined by the Director to be necessary for evaluation of compliance of the unit with the environmental performance standards of Section R315-264-601.

R315-270-24. Hazardous Waste Permit Program -- Specific Part B Information Requirements for Process Vents.

Except as otherwise provided in Section R315-264-1, owners and operators of facilities that have process vents to which Sections R315-264-1030 through 1036 applies shall provide the following additional information:

(a) For facilities that cannot install a closed-vent system and control device to comply with the provisions of Sections R315-264-1030 through 1036 on the effective date that the facility becomes subject to the provisions of Sections R315-264-1030 through 1036 or 40 CFR 265.1030 through 1035, which are adopted by reference, an implementation schedule as specified in Subsection R315-264-1033(a)(2).

(b) Documentation of compliance with the process vent standards in Section R315-264-1032, including:

(1) Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility, i.e., the total emissions for all affected vents at the facility, and the approximate location within the facility of each affected unit, e.g., identify the hazardous waste management units on a facility plot plan.

(2) Information and data supporting estimates of vent emissions and emission reduction achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, estimates of vent emissions and emission reductions shall be made using operating parameter values, e.g., temperatures, flow rates, or concentrations, that represent the conditions that exist when the waste management unit is operating at the highest load or capacity level reasonably expected to occur.

(3) Information and data used to determine whether or not a process vent is subject to the requirements of Section R315-264-1032.

(c) Where an owner or operator applies for permission to use a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system to comply with the requirements of Section R315-264-1032, and chooses to use test data to determine the organic removal efficiency or the total organic compound concentration achieved by the control device, a performance test plan as specified in Subsection R315-264-1035(b)(3).

(d) Documentation of compliance with Section R315-264-1033, including:

(1) A list of all information references and sources used in preparing the documentation.

(2) Records, including the dates, of each compliance test required by Subsection R315-264-1033(k).

(3) A design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions" or other engineering texts acceptable to the Director that present basic control device information. The design analysis shall address the vent stream characteristics and control device operation parameters as specified in Subsection R315-264-1035(b)(4)(iii).

(4) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur.

(5) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of 95 weight percent or greater unless the total organic emission limits of Subsection R315-264-1032(a) for affected process vents at the facility can be attained by a control device involving vapor recovery at an efficiency less than 95 weight percent.

R315-270-25. Hazardous Waste Permit Program -- Specific Part B Information Requirements for Equipment.

Except as otherwise provided in Subsection R315-264-1, owners and operators of facilities that have equipment to which Sections R315-264-1050 through 1065 applies shall provide the following additional information:

(a) For each piece of equipment to which Sections R315-264-1050 through 1065 applies:

(1) Equipment identification number and hazardous waste management unit identification.

(2) Approximate locations within the facility, e.g., identify the hazardous waste management unit on a facility plot plan.

(3) Type of equipment, e.g., a pump or pipeline valve.

(4) Percent by weight total organics in the hazardous waste stream at the equipment.

(5) Hazardous waste state at the equipment, e.g., gas/vapor or liquid.

(6) Method of compliance with the standard, e.g., "monthly leak detection and repair" or "equipped with dual mechanical seals".

(b) For facilities that cannot install a closed-vent system and control device to comply with the provisions of Sections R315-264-1050 through 1065 on the effective date that the facility becomes subject to the provisions of Sections R315-264-1050 through 1065 or 40 CFR 265.1050 through 1064, which are adopted by reference, an implementation schedule as specified in Subsection R315-264-1033(a)(2).

(c) Where an owner or operator applies for permission to use a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system and chooses to use test data to determine the organic removal efficiency or the total organic compound concentration achieved by the control device, a performance test plan as specified in Subsection R315-264-1035(b)(3).

(d) Documentation that demonstrates compliance with the equipment standards in Sections R315-264-1052 through 1059. This documentation shall contain the records required under Section R315-264-1064. The Director may request further documentation before deciding if compliance has been demonstrated.

(e) Documentation to demonstrate compliance with Section R315-264-1060 shall include the following information:

(1) A list of all information references and sources used in preparing the documentation.

(2) Records, including the dates, of each compliance test required by Subsection R315-264-1033(j).

(3) A design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions" or other engineering texts acceptable to the Director that present basic control device information. The design analysis shall address the vent stream characteristics and control device operation parameters as specified in Subsection R315-264-1035(b)(4)(iii).

(4) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur.

(5) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of 95 weight percent or greater.

R315-270-26. Hazardous Waste Permit Program -- Special Part B Information Requirements for Drip Pads.

Except as otherwise provided by Subsection R315-264-1, owners and operators of hazardous waste treatment, storage, or disposal facilities that collect, store, or treat hazardous waste on drip pads shall provide the following additional information:

(a) A list of hazardous wastes placed or to be placed on each drip pad.

(b) If an exemption is sought to Sections R315-264-90 through 101, as provided by Subsection R315-264-90, detailed plans and an engineering report describing how the requirements of Subsection R315-264-90(b)(2) shall be met.

(c) Detailed plans and an engineering report describing how the drip pad is or will be designed, constructed, operated and maintained to meet the requirements of Section R315-264-573, including the as-built drawings and specifications. This submission shall address the following items as specified in

Section R315-264-571:

- (1) The design characteristics of the drip pad;
- (2) The liner system;
- (3) The leakage detection system, including the leak detection system and how it is designed to detect the failure of the drip pad or the presence of any releases of hazardous waste or accumulated liquid at the earliest practicable time;
- (4) Practices designed to maintain drip pads;
- (5) The associated collection system;
- (6) Control of run-on to the drip pad;
- (7) Control of run-off from the drip pad;
- (8) The interval at which drippage and other materials will be removed from the associated collection system and a statement demonstrating that the interval will be sufficient to prevent overflow onto the drip pad;
- (9) Procedures for cleaning the drip pad at least once every seven days to ensure the removal of any accumulated residues of waste or other materials, including but not limited to rinsing, washing with detergents or other appropriate solvents, or steam cleaning and provisions for documenting the date, time, and cleaning procedure used each time the pad is cleaned.
- (10) Operating practices and procedures that will be followed to ensure that tracking of hazardous waste or waste constituents off the drip pad due to activities by personnel or equipment is minimized;
- (11) Procedures for ensuring that, after removal from the treatment vessel, treated wood from pressure and non-pressure processes is held on the drip pad until drippage has ceased, including recordkeeping practices;
- (12) Provisions for ensuring that collection and holding units associated with the run-on and run-off control systems are emptied or otherwise managed as soon as possible after storms to maintain design capacity of the system;
- (13) If treatment is carried out on the drip pad, details of the process equipment used, and the nature and quality of the residuals.
- (14) A description of how each drip pad, including appurtenances for control of run-on and run-off, will be inspected in order to meet the requirements of Section R315-264-573. This information should be included in the inspection plan submitted under Subsection R315-270-14(b)(5).
- (15) A certification signed by a qualified Professional Engineer, stating that the drip pad design meets the requirements of Subsection R315-264-573(a) through (f).
- (16) A description of how hazardous waste residues and contaminated materials will be removed from the drip pad at closure, as required under Subsection R315-264-575(a). For any waste not to be removed from the drip pad upon closure, the owner or operator shall submit detailed plans and an engineering report describing how Subsections R315-264-310 (a) and (b) will be complied with. This information should be included in the closure plan and, where applicable, the post-closure plan submitted under Subsection R315-270-14(b)(13).

R315-270-27. Hazardous Waste Permit Program -- Specific Part B Information Requirements for Air Emission Controls for Tanks, Surface Impoundments, and Containers.

(a) Except as otherwise provided in Section R315-264-1, owners and operators of tanks, surface impoundments, or containers that use air emission controls in accordance with the requirements of Sections R315-264-1080 through 1090, shall provide the following additional information:

- (1) Documentation for each floating roof cover installed on a tank subject to Subsection R315-264-1084(d)(1) or (d)(2) that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the applicable design specifications as listed in Subsection R315-264-1084(e)(1) or (f)(1).

- (2) Identification of each container area subject to the requirements of Sections R315-264-1080 through 1090 and certification by the owner or operator that the requirements of Sections R315-270-10 through 29 are met.

- (3) Documentation for each enclosure used to control air pollutant emissions from tanks or containers in accordance with the requirements of Subsection R315-264-1084(d)(5) or 1086(e)(1)(ii) that includes records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T-Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.

- (4) Documentation for each floating membrane cover installed on a surface impoundment in accordance with the requirements of Subsection R315-264-1085(c) that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the specifications listed in Subsection R315-264-1085(c)(1).

- (5) Documentation for each closed-vent system and control device installed in accordance with the requirements of Section R315-264-1087 that includes design and performance information as specified in Subsections R315-270-24(c) and (d).

- (6) An emission monitoring plan for both Method 21 in 40 CFR part 60, appendix A and control device monitoring methods. This plan shall include the following information: monitoring point(s), monitoring methods for control devices, monitoring frequency, procedures for documenting exceedances, and procedures for mitigating noncompliances.

- (7) When an owner or operator of a facility subject to 40 CFR 265.1080 through 1090, which are adopted by reference, cannot comply with Sections R315-264-1080 through 1090 by the date of permit issuance, the schedule of implementation required under 40 CFR 265.1082, which is adopted by reference.

R315-270-28. Hazardous Waste Permit Program -- Part B Information Requirements for Post-Closure Permits.

For post-closure permits, the owner or operator is required to submit only the information specified in Subsections R315-270-14(b)(1), (4), (5), (6), (11), (13), (14), (16), (18) and (19), (c), and (d), unless the Director determines that additional information from Sections R315-270-14, 16, 17, 18, 20, or 21 is necessary. The owner or operator is required to submit the same information when an alternative authority is used in lieu of a post-closure permit as provided in Subsection R315-270-1(c)(7).

R315-270-29. Hazardous Waste Permit Program -- Permit Denial.

The Director may, pursuant to the procedures in Rule R315-124, deny the permit application either in its entirety or as to the active life of a hazardous waste management facility or unit only.

R315-270-30. Hazardous Waste Permit Program -- Conditions Applicable to All Permits.

The following conditions apply to all hazardous waste facility permits, and shall be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations shall be given in the permit.

- (a) Duty to comply. The permittee shall comply with all conditions of this permit, except that the permittee need not comply with the conditions of this permit to the extent and for the duration such noncompliance is authorized in an emergency permit. (See Section R315-270-61). Any permit noncompliance, except under the terms of an emergency permit, constitutes a violation of Sections 19-6-101 through 125 and is

grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

(b) Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit.

(c) Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(d) In the event of noncompliance with the permit, the permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment.

(e) Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control, and related appurtenances, which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

(f) Permit actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(g) Property rights. The permit does not convey any property rights of any sort, or any exclusive privilege.

(h) Duty to provide information. The permittee shall furnish to the Director, within a reasonable time, any relevant information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

(i) Inspection and entry. The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:

(1) Enter at reasonable times upon the permittee's premises where a regulated facility or activity is located or conducted, or where records shall be kept under the conditions of this permit;

(2) Have access to and copy, at reasonable times, any records that shall be kept under the conditions of this permit;

(3) Inspect at reasonable times any facilities, equipment, including monitoring and control equipment; practices; or operations regulated or required under this permit; and

(4) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by Sections 19-6-101 through 125, any substances or parameters at any location.

(j) Monitoring and records.

(1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(2) The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, the certification required by Subsection R315-264-73(b)(9), and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the

sample, measurement, report, certification, or application. This period may be extended by request of the Director at any time. The permittee shall maintain records from all ground-water monitoring wells and associated ground-water surface elevations, for the active life of the facility, and for disposal facilities for the post-closure care period as well.

(3) Records for monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;

(ii) The individual(s) who performed the sampling or measurements;

(iii) The date(s) analyses were performed;

(iv) The individual(s) who performed the analyses;

(v) The analytical techniques or methods used; and

(vi) The results of such analyses.

(k) Signatory requirements. All applications, reports, or information submitted to the Director shall be signed and certified. See Section R315-270-11.

(l) Reporting requirements

(1) Planned changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.

(2) Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. For a new facility, the permittee may not treat, store, or dispose of hazardous waste; and for a facility being modified, the permittee may not treat, store, or dispose of hazardous waste in the modified portion of the facility except as provided in Section R315-270-42, until:

(i) The permittee has submitted to the Director by certified mail or hand delivery a letter signed by the permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the permit; and

(ii)(A) The Director has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or

(B) Within 15 days of the date of submission of the letter in Subsection R315-270-30(1)(2)(i), the permittee has not received notice from the Director of the Director's intent to inspect, prior inspection is waived and the permittee may commence treatment, storage, or disposal of hazardous waste.

(3) Transfers. This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under Sections 19-6-101 through 125. See Section R315-270-40.

(4) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(5) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(6) Twenty-four hour reporting.

(i) The permittee shall report any noncompliance which may endanger health or the environment orally within 24 hours from the time the permittee becomes aware of the circumstances, including:

(A) Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies.

(B) Any information of a release or discharge of hazardous waste or of a fire or explosion from the HWM facility, which could threaten the environment or human health outside the facility.

(ii) The description of the occurrence and its cause shall include:

(A) Name, address, and telephone number of the owner or operator;

(B) Name, address, and telephone number of the facility;

(C) Date, time, and type of incident;

(D) Name and quantity of material(s) involved;

(E) The extent of injuries, if any;

(F) An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and

(G) Estimated quantity and disposition of recovered material that resulted from the incident.

(iii) A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Director may waive the five day written notice requirement in favor of a written report within 15 days.

(7) Manifest discrepancy report: If a significant discrepancy in a manifest is discovered, the permittee shall attempt to reconcile the discrepancy. If not resolved within 15 days, the permittee shall submit a letter report, including a copy of the manifest, to the Director. See Section R315-264-72.

(8) Unmanifested waste report: This report shall be submitted to the Director within 15 days of receipt of unmanifested waste. See Section R315-264-76

(9) Biennial report: A biennial report shall be submitted covering facility activities during odd numbered calendar years. See Section R315-264-75.

(10) Other noncompliance. The permittee shall report all instances of noncompliance not reported under Subsections R315-270-30(l)(4), (5), and (6), at the time monitoring reports are submitted. The reports shall contain the information listed in Subsections R315-270-30(l)(6).

(11) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

(m) Information repository. The Director may require the permittee to establish and maintain an information repository at any time, based on the factors set forth in Subsection R315-124-33(b). The information repository shall be governed by the provisions in Subsections R315-124-124-33(c) through (f).

R315-270-31. Hazardous Waste Permit Program -- Requirements for Recording and Reporting of Monitoring Results.

All permits shall specify:

(a) Requirements concerning the proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods, including biological monitoring methods when appropriate;

(b) Required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including, when appropriate, continuous monitoring;

(c) Applicable reporting requirements based upon the impact of the regulated activity and as specified in Rules R315-264 and 266. Reporting shall be no less frequent than specified in the above regulations.

R315-270-32. Hazardous Waste Permit Program -- Establishing Permit Conditions.

(a) In addition to conditions required in all permits (Section R315-270-30) the Director shall establish conditions,

as required on a case-by-case basis, in permits under Section R315-270-50 (duration of permits), Subsection R315-270-33(a) (schedules of compliance), and Section R315-270-31 (monitoring).

(b)(1) Each permit shall include permit conditions necessary to achieve compliance with Sections 19-6-101 through 125 and rules adopted thereunder, including each of the applicable requirements specified in Rules R315-264, 266, and 268. In satisfying this provision, the Director may incorporate applicable requirements of Rules R315-264, 266, and 268 directly into the permit or establish other permit conditions that are based on these rules.

(2) Each permit issued under Section 19-6-108 shall contain terms and conditions as the Director determines necessary to protect human health and the environment.

(3) If, as the result of an assessment(s) or other information, the Director determines that conditions are necessary in addition to those required under 40 CFR parts 63, subpart EEE, Rule R315-264 or 266 to ensure protection of human health and the environment, he shall include those terms and conditions in a permit for a hazardous waste combustion unit.

(c) An applicable requirement is a statutory or regulatory requirement which takes effect prior to final administrative disposition of a permit. An applicable requirement is also any requirement which takes effect prior to the modification or revocation and reissuance of a permit, to the extent allowed in Section R315-270-41.

(d) New or reissued permits, and to the extent allowed under Section R315-270-41, modified or revoked and reissued permits, shall incorporate each of the applicable requirements referenced in Section R315-270-32 and in Section R315-270-31.

(e) Incorporation. All permit conditions shall be incorporated either expressly or by reference. If incorporated by reference, a specific citation to the applicable regulations or requirements shall be given in the permit.

R315-270-33. Hazardous Waste Permit Program -- Schedules of Compliance.

(a) The permit may, when appropriate, specify a schedule of compliance leading to compliance with Sections 19-6-101 through 125 and rules adopted thereunder.

(1) Time for compliance. Any schedules of compliance under Section R315-270-33 shall require compliance as soon as possible.

(2) Interim dates. Except as provided in Subsection R315-270-33(b)(1)(ii), if a permit establishes a schedule of compliance which exceeds 1 year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement.

(i) The time between interim dates shall not exceed 1 year.

(ii) If the time necessary for completion of any interim requirement is more than 1 year and is not readily divisible into stages for completion, the permit shall specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date.

(3) Reporting. The permit shall be written to require that no later than 14 days following each interim date and the final date of compliance, the permittee shall notify the Director in writing, of its compliance or noncompliance with the interim or final requirements.

(b) Alternative schedules of compliance. A permit applicant or permittee may cease conducting regulated activities; by receiving a terminal volume of hazardous waste and, for treatment and storage HWM facilities, closing pursuant to applicable requirements; and, for disposal HWM facilities, closing and conducting post-closure care pursuant to applicable requirements; rather than continue to operate and meet permit

requirements as follows:

(1) If the permittee decides to cease conducting regulated activities at a given time within the term of a permit which has already been issued:

(i) The permit may be modified to contain a new or additional schedule leading to timely cessation of activities; or

(ii) The permittee shall cease conducting permitted activities before noncompliance with any interim or final compliance schedule requirement already specified in the permit.

(2) If the decision to cease conducting regulated activities is made before issuance of a permit whose term shall include the termination date, the permit shall contain a schedule leading to termination which shall ensure timely compliance with applicable requirements.

(3) If the permittee is undecided whether to cease conducting regulated activities, the Director may issue or modify a permit to contain two schedules as follows:

(i) Both schedules shall contain an identical interim deadline requiring a final decision on whether to cease conducting regulated activities no later than a date which ensures sufficient time to comply with applicable requirements in a timely manner if the decision is to continue conducting regulated activities;

(ii) One schedule shall lead to timely compliance with applicable requirements;

(iii) The second schedule shall lead to cessation of regulated activities by a date which shall ensure timely compliance with applicable requirements;

(iv) Each permit containing two schedules shall include a requirement that after the permittee has made a final decision under Subsection R315-270-33(b)(3)(i) it shall follow the schedule leading to compliance if the decision is to continue conducting regulated activities, and follow the schedule leading to termination if the decision is to cease conducting regulated activities.

(4) The applicant's or permittee's decision to cease conducting regulated activities shall be evidenced by a firm public commitment satisfactory to the Director, such as resolution of the board of directors of a corporation.

R315-270-40. Hazardous Waste Permit Program-- Transfer of Permits.

(a) A permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, under Subsection R315-270-40(b) or 41(b)(2), to identify the new permittee and incorporate such other requirements as may be necessary under the appropriate Act.

(b) Changes in the ownership or operational control of a facility may be made as a Class 1 modification with prior written approval of the Director in accordance with Section R315-270-42. The new owner or operator shall submit a revised permit application no later than 90 days prior to the scheduled change. A written agreement containing a specific date for transfer of permit responsibility between the current and new permittees shall also be submitted to the Director. When a transfer of ownership or operational control occurs, the old owner or operator shall comply with the requirements of Sections R315-264-140 through 151 until the new owner or operator has demonstrated that he or she is complying with the requirements of Sections R315-264-140 through 151. The new owner or operator shall demonstrate compliance with Sections R315-264-140 through 151 requirements within six months of the date of the change of ownership or operational control of the facility. Upon demonstration to the Director by the new owner or operator of compliance with Sections R315-264-140 through 151, the Director shall notify the old owner or operator that he or she no longer needs to comply with Sections R315-264-140

through 151 as of the date of demonstration.

R315-270-41. Hazardous Waste Permit Program -- Modification or Revocation and Reissuance of Permits.

When the Director receives any information; for example, inspects the facility, receives information submitted by the permittee as required in the permit, see Section R315-270-30, receives a request for revocation and reissuance under Section R315-124-5 or conducts a review of the permit file; the Director may determine whether one or more of the causes listed in Subsections R315-270-41(a) and (b) for modification, or revocation and reissuance or both exist. If cause exists, the Director may modify or revoke and reissue the permit accordingly, subject to the limitations of Subsection R315-270-41(c), and may request an updated application if necessary. When a permit is modified, only the conditions subject to modification are reopened. If a permit is revoked and reissued, the entire permit is reopened and subject to revision and the permit is reissued for a new term. See Subsection R315-124-5(c)(2). If cause does not exist under Section R315-270-41, the Director shall not modify or revoke and reissue the permit, except on request of the permittee. If a permit modification is requested by the permittee, the Director shall approve or deny the request according to the procedures of Subsection R315-270-42. Otherwise, a draft permit shall be prepared and other procedures in Rule R315-124 followed.

(a) Causes for modification. The following are causes for modification, but not revocation and reissuance, of permits; the following may be causes for revocation and reissuance, as well as modification, when the permittee requests or agrees.

(1) Alterations. There are material and substantial alterations or additions to the permitted facility or activity which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit.

(2) Information. The Director has received information. Permits may be modified during their terms for this cause only if the information was not available at the time of permit issuance, other than revised regulations, guidance, or test methods, and would have justified the application of different permit conditions at the time of issuance.

(3) New statutory requirements or regulations. The standards or regulations on which the permit was based have been changed by statute, through promulgation of new or amended standards or regulations, or by judicial decision after the permit was issued.

(4) Compliance schedules. The Director determines good cause exists for modification of a compliance schedule, such as an act of God, strike, flood, or materials shortage or other events over which the permittee has little or no control and for which there is no reasonably available remedy.

(5) Notwithstanding any other provision in Section R315-270-41, when a permit for a land disposal facility is reviewed by the Director under Subsection R315-270-50(d), the Director shall modify the permit as necessary to assure that the facility continues to comply with the currently applicable requirements in Rules R315-124, 260 through 266, and 270.

(b) Causes for modification or revocation and reissuance. The following are causes to modify or, alternatively, revoke and reissue a permit:

(1) Cause exists for termination under Section R315-270-43, and the Director determines that modification or revocation and reissuance is appropriate.

(2) The Director has received notification; as required in the permit, see Subsection R315-270-30(1)(3); of a proposed transfer of the permit.

(c) Facility siting. Suitability of the facility location will not be considered at the time of permit modification or revocation and reissuance unless new information or standards

indicate that a threat to human health or the environment exists which was unknown at the time of permit issuance.

R315-270-42. Hazardous Waste Permit Program -- Permit Modification at the Request of the Permittee.

(a) Class 1 modifications.

(1) Except as provided in Subsection R315-270-42(a)(2), the permittee may put into effect Class 1 modifications listed in appendix I of Section R315-270-42 under the following conditions:

(i) The permittee shall notify the Director concerning the modification by certified mail or other means that establish proof of delivery within 7 calendar days after the change is put into effect. This notice shall specify the changes being made to permit conditions or supporting documents referenced by the permit and shall explain why they are necessary. Along with the notice, the permittee shall provide the applicable information required by Sections R315-270-13 through 21, 62, and 63.

(ii) The permittee shall send a notice of the modification to all persons on the facility mailing list, maintained by the Director in accordance with Subsection R315-124-10(c)(viii), and the appropriate units of State and local government, as specified in Subsection R315-124-10(c)(ix). This notification shall be made within 90 calendar days after the change is put into effect. For the Class 1 modifications that require prior Director approval, the notification shall be made within 90 calendar days after the Director approves the request.

(iii) Any person may request the Director to review, and the Director may for cause reject, any Class 1 modification. The Director shall inform the permittee by certified mail that a Class 1 modification has been rejected, explaining the reasons for the rejection. If a Class 1 modification has been rejected, the permittee shall comply with the original permit conditions.

(2) Class 1 permit modifications identified in appendix I by an asterisk may be made only with the prior written approval of the Director.

(3) For a Class 1 permit modification, the permittee may elect to follow the procedures in Subsection R315-270-42(b) for Class 2 modifications instead of the Class 1 procedures. The permittee shall inform the Director of this decision in the notice required in Subsection R315-270-42(b)(1).

(b) Class 2 modifications.

(1) For Class 2 modifications, listed in appendix I of Section R315-270-42, the permittee shall submit a modification request to the Director that:

(i) Describes the exact change to be made to the permit conditions and supporting documents referenced by the permit;

(ii) Identifies that the modification is a Class 2 modification;

(iii) Explains why the modification is needed; and

(iv) Provides the applicable information required by Sections R315-270-13 through 21, 62, and 63.

(2) The permittee shall send a notice of the modification request to all persons on the facility mailing list maintained by the Director and to the appropriate units of State and local government as specified in subsection R315-124-10(c)(ix) and shall publish this notice in a major local newspaper of general circulation. This notice shall be mailed and published within 7 days before or after the date of submission of the modification request, and the permittee shall provide to the Director evidence of the mailing and publication. The notice shall include:

(i) Announcement of a 60-day comment period, in accordance with Subsection R315-270-42(b)(5), and the name and address of an Agency contact to whom comments shall be sent;

(ii) Announcement of the date, time, and place for a public meeting held in accordance with Subsection R315-270-42(b)(4);

(iii) Name and telephone number of the permittee's contact person;

(iv) Name and telephone number of an Agency contact person;

(v) Location where copies of the modification request and any supporting documents can be viewed and copied; and

(vi) The following statement: "The permittee's compliance history during the life of the permit being modified is available from the Agency contact person."

(3) The permittee shall place a copy of the permit modification request and supporting documents in a location accessible to the public in the vicinity of the permitted facility.

(4) The permittee shall hold a public meeting no earlier than 15 days after the publication of the notice required in Subsection R315-270-42(b)(2) and no later than 15 days before the close of the 60-day comment period. The meeting shall be held to the extent practicable in the vicinity of the permitted facility.

(5) The public shall be provided 60 days to comment on the modification request. The comment period shall begin on the date the permittee publishes the notice in the local newspaper. Comments should be submitted to the Division contact identified in the public notice.

(6)(i) No later than 90 days after receipt of the notification request, the Director shall:

(A) Approve the modification request, with or without changes, and modify the permit accordingly;

(B) Deny the request;

(C) Determine that the modification request shall follow the procedures in Subsection R315-270-42(c) for Class 3 modifications for the following reasons:

(1) There is significant public concern about the proposed modification; or

(2) The complex nature of the change requires the more extensive procedures of Class 3.

(D) Approve the request, with or without changes, as a temporary authorization having a term of up to 180 days, or

(E) Notify the permittee that the Director will decide on the request within the next 30 days.

(ii) If the Director notifies the permittee of a 30-day extension for a decision, the Director shall, no later than 120 days after receipt of the modification request:

(A) Approve the modification request, with or without changes, and modify the permit accordingly;

(B) Deny the request; or

(C) Determine that the modification request shall follow the procedures in Subsection R315-270-42(c) for Class 3 modifications for the following reasons:

(1) There is significant public concern about the proposed modification; or

(2) The complex nature of the change requires the more extensive procedures of Class 3.

(D) Approve the request, with or without changes, as a temporary authorization having a term of up to 180 days.

(iii) If the Director fails to make one of the decisions specified in Subsection R315-270-42(b)(6)(ii) by the 120th day after receipt of the modification request, the permittee is automatically authorized to conduct the activities described in the modification request for up to 180 days, without formal action by the Director. The authorized activities shall be conducted as described in the permit modification request and shall be in compliance with all appropriate standards of Rule R315-265. If the Director approves, with or without changes, or denies the modification request during the term of the temporary or automatic authorization provided for in Section R315-270-42(b)(6)(i), (ii), or (iii), such action cancels the temporary or automatic authorization.

(iv)(A) In the case of an automatic authorization under Subsection R315-270-42(b)(6)(iii), or a temporary authorization under Subsection R315-270-42(b)(6)(i)(D) or (ii)(D), if the Director has not made a final approval or denial of the

modification request by the date 50 days prior to the end of the temporary or automatic authorization, the permittee shall within seven days of that time send a notification to persons on the facility mailing list, and make a reasonable effort to notify other persons who submitted written comments on the modification request, that:

(1) The permittee has been authorized temporarily to conduct the activities described in the permit modification request, and

(2) Unless the Director acts to give final approval or denial of the request by the end of the authorization period, the permittee shall receive authorization to conduct such activities for the life of the permit.

(B) If the owner/operator fails to notify the public by the date specified in Subsection R315-270-42(b)(6)(iv)(A), the effective date of the permanent authorization shall be deferred until 50 days after the owner/operator notifies the public.

(v) Except as provided in Subsection R315-270-42(b)(6)(vii), if the Director does not finally approve or deny a modification request before the end of the automatic or temporary authorization period or reclassify the modification as a Class 3, the permittee is authorized to conduct the activities described in the permit modification request for the life of the permit unless modified later under Section R315-270-41 or 42. The activities authorized under Subsection R315-270-42(b) shall be conducted as described in the permit modification request and shall be in compliance with all appropriate standards of Rule R315-265.

(vi) In making a decision to approve or deny a modification request, including a decision to issue a temporary authorization or to reclassify a modification as a Class 3, the Director shall consider all written comments submitted during the public comment period and shall respond in writing to all significant comments in the Director's decision.

(vii) With the written consent of the permittee, the Director may extend indefinitely or for a specified period the time periods for final approval or denial of a modification request or for reclassifying a modification as a Class 3.

(7) The Director may deny or change the terms of a Class 2 permit modification request under Subsection R315-270-42(b)(6)(i) through (iii) for the following reasons:

(i) The modification request is incomplete;

(ii) The requested modification does not comply with the appropriate requirements of Rule R315-264 or other applicable requirements; or

(iii) The conditions of the modification fail to protect human health and the environment.

(8) The permittee may perform any construction associated with a Class 2 permit modification request beginning 60 days after the submission of the request unless the Director establishes a later date for commencing construction and informs the permittee in writing before day 60.

(c) Class 3 modifications.

(1) For Class 3 modifications listed in appendix I of Section R315-270-42, the permittee shall submit a modification request to the Director that:

(i) Describes the exact change to be made to the permit conditions and supporting documents referenced by the permit;

(ii) Identifies that the modification is a Class 3 modification;

(iii) Explains why the modification is needed; and

(iv) Provides the applicable information required by Sections R315-270-13 through 22, 62, 63, and 66.

(2) The permittee shall send a notice of the modification request to all persons on the facility mailing list maintained by the Director and to the appropriate units of State and local government as specified in Subsection R315-124-10(c)(ix) and shall publish this notice in a major local newspaper of general circulation. This notice shall be mailed and published within

seven days before or after the date of submission of the modification request, and the permittee shall provide to the Director evidence of the mailing and publication. The notice shall include:

(i) Announcement of a 60-day comment period, and a name and address of the Director to whom comments shall be sent;

(ii) Announcement of the date, time, and place for a public meeting on the modification request, in accordance with Subsection R315-270-42(c)(4);

(iii) Name and telephone number of the permittee's contact person;

(iv) Name and telephone number of an Division contact person;

(v) Location where copies of the modification request and any supporting documents can be viewed and copied; and

(vi) The following statement: "The permittee's compliance history during the life of the permit being modified is available from the Division's contact person."

(3) The permittee shall place a copy of the permit modification request and supporting documents in a location accessible to the public in the vicinity of the permitted facility.

(4) The permittee shall hold a public meeting no earlier than 15 days after the publication of the notice required in Subsection R315-270-42(c)(2) and no later than 15 days before the close of the 60-day comment period. The meeting shall be held to the extent practicable in the vicinity of the permitted facility.

(5) The public shall be provided at least 60 days to comment on the modification request. The comment period shall begin on the date the permittee publishes the notice in the local newspaper. Comments should be submitted to the Director.

(6) After the conclusion of the 60-day comment period, the Director shall grant or deny the permit modification request according to the permit modification procedures of Rule R315-124. In addition, the Director shall consider and respond to all significant written comments received during the 60-day comment period.

(d) Other modifications.

(1) In the case of modifications not explicitly listed in appendix I of Section R315-270-42, the permittee may submit a Class 3 modification request to the Director, or the permittee may request a determination by the Director that the modification should be reviewed and approved as a Class 1 or Class 2 modification. If the permittee requests that the modification be classified as a Class 1 or 2 modification, the permittee shall provide the Director with the necessary information to support the requested classification.

(2) The Director shall make the determination described in Subsection R315-270-42(d)(1) as promptly as practicable. In determining the appropriate class for a specific modification, the Director shall consider the similarity of the modification to other modifications codified in appendix I and the following criteria:

(i) Class 1 modifications apply to minor changes that keep the permit current with routine changes to the facility or its operation. These changes do not substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment. In the case of Class 1 modifications, the Director may require prior approval.

(ii) Class 2 modifications apply to changes that are necessary to enable a permittee to respond, in a timely manner, to,

(A) Common variations in the types and quantities of the wastes managed under the facility permit,

(B) Technological advancements, and

(C) Changes necessary to comply with new regulations, where these changes can be implemented without substantially

changing design specifications or management practices in the permit.

(iii) Class 3 modifications substantially alter the facility or its operation.

(e) Temporary authorizations.

(1) Upon request of the permittee, the Director may, without prior public notice and comment, grant the permittee a temporary authorization in accordance with Subsection R315-270-42(e). Temporary authorizations shall have a term of not more than 180 days.

(2)(i) The permittee may request a temporary authorization for:

(A) Any Class 2 modification meeting the criteria in Subsection R315-270-42(e)(3)(ii), and

(B) Any Class 3 modification that meets the criteria in Subsection R315-270-42(e)(3)(ii)(A) or (B); or that meets the criteria in Subsections R315-270-42(e)(3)(ii)(C) through (E) and provides improved management or treatment of a hazardous waste already listed in the facility permit.

(ii) The temporary authorization request shall include:

(A) A description of the activities to be conducted under the temporary authorization;

(B) An explanation of why the temporary authorization is necessary; and

(C) Sufficient information to ensure compliance with Rule R315-264 standards.

(iii) The permittee shall send a notice about the temporary authorization request to all persons on the facility mailing list maintained by the Director and to appropriate units of State and local governments as specified in Subsection R315-124-10(c)(ix). This notification shall be made within seven days of submission of the authorization request.

(3) The Director shall approve or deny the temporary authorization as quickly as practical. To issue a temporary authorization, the Director shall find:

(i) The authorized activities are in compliance with the standards of Rule R315-264.

(ii) The temporary authorization is necessary to achieve one of the following objectives before action is likely to be taken on a modification request:

(A) To facilitate timely implementation of closure or corrective action activities;

(B) To allow treatment or storage in tanks or containers, or in containment buildings in accordance with Rule R315-268;

(C) To prevent disruption of ongoing waste management activities;

(D) To enable the permittee to respond to sudden changes in the types or quantities of the wastes managed under the facility permit; or

(E) To facilitate other changes to protect human health and the environment.

(4) A temporary authorization may be reissued for one additional term of up to 180 days provided that the permittee has requested a Class 2 or 3 permit modification for the activity covered in the temporary authorization, and:

(i) The reissued temporary authorization constitutes the Director's decision on a Class 2 permit modification in accordance with Subsection R315-270-42(b)(6)(i)(D) or (ii)(D), or

(ii) The Director determines that the reissued temporary authorization involving a Class 3 permit modification request is warranted to allow the authorized activities to continue while the modification procedures of Subsection R315-270-42(c) are conducted.

(f) Public notice and appeals of permit modification decisions.

(1) The Director shall notify persons on the facility mailing list and appropriate units of State and local government within 10 days of any decision under Section R315-270-42 to grant or

deny a Class 2 or 3 permit modification request. The Director shall also notify such persons within 10 days after an automatic authorization for a Class 2 modification goes into effect under Subsection R315-270-42(b)(6)(iii) or (v).

(2) The Director's decision to grant or deny a Class 2 or 3 permit modification request under Section R315-270-42 may be appealed under the permit appeal procedures of Section R315-124-19.

(3) An automatic authorization that goes into effect under Subsection R315-270-42(b)(6)(iii) or (v) may be appealed under the permit appeal procedures of Section R315-124-19; however, the permittee may continue to conduct the activities pursuant to the automatic authorization unless and until a final determination is made.

(g) Newly regulated wastes and units.

(1) The permittee is authorized to continue to manage wastes listed or identified as hazardous under Rule R315-261, or to continue to manage hazardous waste in units newly regulated as hazardous waste management units, if:

(i) The unit was in existence as a hazardous waste facility with respect to the newly listed or characterized waste or newly regulated waste management unit on the effective date of the final rule listing or identifying the waste, or regulating the unit;

(ii) The permittee submits a Class 1 modification request on or before the date on which the waste or unit becomes subject to the new requirements;

(iii) The permittee is in compliance with the applicable standards of Rules R315-265 and 266;

(iv) The permittee also submits a complete Class 2 or 3 modification request within 180 days of the effective date of the rule listing or identifying the waste, or subjecting the unit to hazardous waste management standards;

(v) In the case of land disposal units, the permittee certifies that each such unit is in compliance with all applicable requirements of Rule R315-265 for groundwater monitoring and financial responsibility on the date 12 months after the effective date of the rule identifying or listing the waste as hazardous, or regulating the unit as a hazardous waste management unit. If the owner or operator fails to certify compliance with all these requirements, the permittee shall lose authority to operate under Section R315-270-42.

(2) New wastes or units added to a facility's permit under Subsection R315-270-42(g) do not constitute expansions for the purpose of the 25 percent capacity expansion limit for Class 2 modifications.

(h) Reserved.

(i) Permit modification list. The Director shall maintain a list of all approved permit modifications and shall publish a notice once a year in a State-wide newspaper that an updated list is available for review.

(j) Combustion facility changes to meet 40 CFR 63 MACT standards. The following procedures apply to hazardous waste combustion facility permit modifications requested under appendix I of Section R315-270-42, section L(9).

(1) Facility owners or operators shall have complied with the Notification of Intent to Comply (NIC) requirements of 40 CFR 63.1210 that were in effect prior to October 11, 2000, (See 40 CFR part 63 Section 63.1200-63.1499 revised as of July 1, 2000) in order to request a permit modification under Section R315-270-42 for the purpose of technology changes needed to meet the standards under 40 CFR 63.1203, 63.1204, and 63.1205.

(2) Facility owners or operators shall comply with the Notification of Intent to Comply (NIC) requirements of 40 CFR 63.1210(b) and 63.1212(a) before a permit modification can be requested under Section R315-270-42 for the purpose of technology changes needed to meet the 40 CFR 63.1215, 63.1216, 63.1217, 63.1218, 63.1219, 63.1220, and 63.1221 standards promulgated on October 12, 2005.

(3) If the Director does not approve or deny the request within 90 days of receiving it, the request shall be deemed approved. The Director may, at the Director's discretion, extend this 90 day deadline one time for up to 30 days by notifying the facility owner or operator.

(k) Waiver of permit conditions in support of transition to the 40 CFR 63 MACT standards.

(1) the permittee may request to have specific operating and emissions limits waived by submitting a Class 1 permit modification request under appendix I of Section R315-270-42, section L(10). The permittee shall:

(i) Identify the specific RCRA permit operating and emissions limits which the permittee is requesting to waive;

(ii) Provide an explanation of why the changes are necessary in order to minimize or eliminate conflicts between the hazardous waste permit and MACT compliance; and

(iii) Discuss how the revised provisions will be sufficiently protective.

(iv) The Director shall approve or deny the request within 30 days of receipt of the request. The Director may, at the Director's discretion, extend this 30 day deadline one time for up to 30 days by notifying the facility owner or operator.

(2) To request this modification in conjunction with MACT performance testing where permit limits may only be waived during actual test events and pretesting, as defined under 40 CFR 63.1207(h)(2)(i) and (ii), for an aggregate time not to exceed 720 hours of operation, renewable at the discretion of the Director, the permittee shall:

(i) Submit a modification request to the Director at the same time test plans are submitted to the Director; and

(ii) The Director may elect to approve or deny the request contingent upon approval of the test plans.

R315-270-43. Appendix I to Section R315-270-42 -- Classification of Permit Modification.

Table	
Modifications	Class
A. General Permit Provisions	
1. Administrative and informational changes	1
2. Correction of typographical errors	1
3. Equipment replacement or upgrading with functionally equivalent components, e.g., pipes, valves, pumps, conveyors, controls	1
4. Changes in the frequency of or procedures for monitoring, reporting, sampling, or maintenance activities by the permittee:	
a. To provide for more frequent monitoring, reporting, sampling, or maintenance	1
b. Other changes,	2
5. Schedule of compliance:	
a. Changes in interim compliance dates, with prior approval of the Director	1
b. Extension of final compliance date	3
6. Changes in expiration date of permit to allow earlier permit termination, with prior approval of the Director	1
7. Changes in ownership or operational control of a facility, provided the procedures of Subsection R315-270-40(b) are followed	1
8. Changes to remove permit conditions that are no longer applicable, i.e., because the standards upon which they are based are no longer applicable to the facility.	1
9. Changes to remove permit conditions applicable to a unit excluded under the provisions of Section R315-261-4.	1
10. Changes in the expiration date of a permit issued to a facility at which all units are excluded under the provisions of Section R315-261-4.	1
B. General Facility Standards	
1. Changes to waste sampling or analysis methods	
a. To conform with agency guidance or regulations	1
b. To incorporate changes associated with F039, multi-source leachate, sampling or analysis	1

c. To incorporate changes associated with underlying hazardous constituents in ignitable or corrosive wastes	1
d. Other changes	2
2. Changes to analytical quality assurance/control plan:	
a. To conform with agency guidance or regulations	1
b. Other changes	2
3. Changes in procedures for maintaining the operating record	1
4. Changes in frequency or content of inspection schedules	2
5. Changes in the training plan:	
a. That affect the type or decrease the amount of training given to employees	2
b. Other changes	1
6. Contingency plan:	
a. Changes in emergency procedures, i.e., spill or release response procedures	2
b. Replacement with functionally equivalent equipment, upgrade, or relocate emergency equipment listed	1
c. Removal of equipment from emergency equipment list	2
d. Changes in name, address, or phone number of coordinators or other persons or agencies identified in the plan	1
7. Construction quality assurance plan:	
a. Changes that the CQA officer certifies in the operating record will provide equivalent or better certainty that the unit components meet the design specifications	1
b. Other changes	2

Note: When a permit modification, such as introduction of a new unit, requires a change in facility plans or other general facility standards, that change shall be reviewed under the same procedures as the permit modification.

C. Ground-Water Protection	
1. Changes to wells:	
a. Changes in the number, location, depth, or design of upgradient or downgradient wells of permitted ground-water monitoring system	2
b. Replacement of an existing well that has been damaged or rendered inoperable, without change to location, design, or depth of the well	1
2. Changes in ground-water sampling or analysis procedures or monitoring schedule, with prior approval of the Director	1
3. Changes in statistical procedure for determining whether a statistically significant change in ground-water quality between upgradient and downgradient wells has occurred, with prior approval of the Director	1
4. Changes in point of compliance	2
5. Changes in indicator parameters, hazardous constituents, or concentration limits, including ACLs:	
a. As specified in the groundwater protection standard	3
b. As specified in the detection monitoring program	2
6. Changes to a detection monitoring program as required by Subsection R315-264-98(h), unless otherwise specified in this appendix	2
7. Compliance monitoring program:	
a. Addition of compliance monitoring program as required by Sections R315-264-98(g)(4) and R315-264-99	3
b. Changes to a compliance monitoring program as required by Subsection R315-264-99(j), unless otherwise specified in this appendix	2
8. Corrective action program:	
a. Addition of a corrective action program as required by Subsection R315-264-99(h)(2) and Section R315-264-100	3
b. Changes to a corrective action program as required by Subsection R315-264-100(h), unless otherwise specified in this appendix	2
D. Closure	
1. Changes to the closure plan:	
a. Changes in estimate of maximum extent of operations or maximum inventory of waste on-site at any time during the active life of the facility, with prior approval of the Director	1
b. Changes in the closure schedule for any unit,	1

changes in the final closure schedule for the facility, or extension of the closure period, with prior approval of the Director		treatment process or management standards, provided that the wastes are restricted from land disposal and are to be treated to meet some or all of the applicable treatment standards, or that are to be treated to satisfy, in whole or in part, the standard of "use of practically available technology that yields the greatest environmental benefit." This modification is not applicable to dioxin-containing wastes, F020, 021, 022, 023, 026, 027, and 028)	
c. Changes in the expected year of final closure, where other permit conditions are not changed, with prior approval of the Director	1	b. That do not require the addition of units or a change in the treatment process or management standards, and provided that the units have previously received wastes of the same type, e.g., incinerator scrubber water. This modification is not applicable to dioxin-containing wastes, F020, 021, 022, 023, 026, 027, and 028	1
d. Changes in procedures for decontamination of facility equipment or structures, with prior approval of the Director	1		
e. Changes in approved closure plan resulting from unexpected events occurring during partial or final closure, unless otherwise specified in this appendix	2		
f. Extension of the closure period to allow a landfill, surface impoundment or land treatment unit to receive non-hazardous wastes after final receipt of hazardous wastes under Subsections R315-264-113(d) and (e)	2		
2. Creation of a new landfill unit as part of closure	3	G. Tanks	
3. Addition of the following new units to be used temporarily for closure activities:		1.	
a. Surface impoundments	3	a. Modification or addition of tank units resulting in greater than 25% increase in the facility's tank capacity, except as provided in G(1)(c), G(1)(d), and G(1)(e) below	3
b. Incinerators	3	b. Modification or addition of tank units resulting in up to 25% increase in the facility's tank capacity, except as provided in G(1)(d) and G(1)(e) below	2
c. Waste piles that do not comply with Subsection R315-264-250(c)	3	c. Addition of a new tank that will operate for more than 90 days using any of the following physical or chemical treatment technologies: neutralization, dewatering, phase separation, or component separation	2
d. Waste piles that comply with Subsection R315-264-250(c)	2	d. After prior approval of the Director, addition of a new tank that will operate for up to 90 days using any of the following physical or chemical treatment technologies: neutralization, dewatering, phase separation, or component separation	1
e. Tanks or containers, other than specified below	2	e. Modification or addition of tank units or treatment processes necessary to treat wastes that are restricted from land disposal to meet some or all of the applicable treatment standards or to treat wastes to satisfy, in whole or in part, the standard of "use of practically available technology that yields the greatest environmental benefit," with prior approval of the Director. This modification may also involve addition of new waste codes. It is not applicable to dioxin-containing wastes, F020, 021, 022, 023, 026, 027, and 028	1
f. Tanks used for neutralization, dewatering, phase separation, or component separation, with prior approval of the Director	1	2. Modification of a tank unit or secondary containment system without increasing the capacity of the unit	2
g. Staging piles	2	3. Replacement of a tank with a tank that meets the same design standards and has a capacity within +/-10% of the replaced tank provided	1
E. Post-Closure		-The capacity difference is no more than 1500 gallons,	
1. Changes in name, address, or phone number of contact in post-closure plan	1	-The facility's permitted tank capacity is not increased, and	
2. Extension of post-closure care period	2	-The replacement tank meets the same conditions in the permit.	
3. Reduction in the post-closure care period	3	4. Modification of a tank management practice	2
4. Changes to the expected year of final closure, where other permit conditions are not changed	1	5. Management of different wastes in tanks:	
5. Changes in post-closure plan necessitated by events occurring during the active life of the facility, including partial and final closure	2	a. That require additional or different management practices, tank design, different fire protection specifications, or significantly different tank treatment process from that authorized in the permit, except as provided in (G)(5)(c) below	3
F. Containers		b. That do not require additional or different management practices, tank design, different fire protection specifications, or significantly different tank treatment process than authorized in the permit, except as provided in (G)(5)(d)	2
1. Modification or addition of container units:		c. That require addition of units or change in treatment processes or management standards, provided that the wastes are restricted from land disposal and are to be treated to meet some or all of the applicable treatment standards or that are to be treated to satisfy, in whole or in	1
a. Resulting in greater than 25% increase in the facility's container storage capacity, except as provided in F(1)(c) and F(4)(a) below	3		
b. Resulting in up to 25% increase in the facility's container storage capacity, except as provided in F(1)(c) and F(4)(a) below	2		
c. Or treatment processes necessary to treat wastes that are restricted from land disposal to meet some or all of the applicable treatment standards or to treat wastes to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" contained in Subsection R315-268-8(a)(2)(ii), with prior approval of the Director. This modification may also involve addition of new waste codes or narrative descriptions of wastes. It is not applicable to dioxin-containing wastes, F020, 021, 022, 023, 026, 027, and 028	1		
2.			
a. Modification of a container unit without increasing the capacity of the unit	2		
b. Addition of a roof to a container unit without alteration of the containment system	1		
3. Storage of different wastes in containers, except as provided in (F)(4) below:			
a. That require additional or different management practices from those authorized in the permit	3		
b. That do not require additional or different management practices from those authorized in the permit	2		
Note: See Subsection R315-270-42(g) for modification procedures to be used for the management of newly listed or identified wastes.			
4. Storage or treatment of different wastes in containers:			
a. That require addition of units or change in	1		

part, the standard of "use of practically available technology that yields the greatest environmental benefit." The modification is not applicable to dioxin-containing wastes, F020, 021, 022, 023, 026, 027, and 028		3. Replacement of a waste pile unit with another waste pile unit of the same design and capacity and meeting all waste pile conditions in the permit	1
d. That do not require the addition of units or a change in the treatment process or management standards, and provided that the units have previously received wastes of the same type, e.g., incinerator scrubber water. This modification is not applicable to dioxin-containing wastes, F020, 021, 022, 023, 026, 027, and 028	1	4. Modification of a waste pile management practice	2
Note: See Subsection R315-270-42(g) for modification procedures to be used for the management of newly listed or identified wastes.		5. Storage or treatment of different wastes in waste piles:	
H. Surface Impoundments		a. That require additional or different management practices or different design of the unit	3
1. Modification or addition of surface impoundment units that result in increasing the facility's surface impoundment storage or treatment capacity	3	b. That do not require additional or different management practices or different design of the unit	2
2. Replacement of a surface impoundment unit	3	6. Conversion of an enclosed waste pile to a containment building unit	2
3. Modification of a surface impoundment unit without increasing the facility's surface impoundment storage or treatment capacity and without modifying the unit's liner, leak detection system, or leachate collection system	2	Note: See Subsection R315-270-42(g) for modification procedures to be used for the management of newly listed or identified wastes.	
4. Modification of a surface impoundment management practice ⁰	2	J. Landfills and Unenclosed Waste Piles	
5. Treatment, storage, or disposal of different wastes in surface impoundments:		1. Modification or addition of landfill units that result in increasing the facility's disposal capacity	3
a. That require additional or different management practices or different design of the liner or leak detection system than authorized in the permit	3	2. Replacement of a landfill	3
b. That do not require additional or different management practices or different design of the liner or leak detection system than authorized in the permit	2	3. Addition or modification of a liner, leachate collection system, leachate detection system, run-off control, or final cover system	3
c. That are wastes restricted from land disposal that meet the applicable treatment standards or that are treated to satisfy the standard of "use of practically available technology that yields the greatest environmental benefit," and provided that the unit meets the minimum technological requirements stated in Subsection R315-268-5(h)(2). This modification is not applicable to dioxin-containing wastes, F020, 021, 022, 023, 026, 027, and 028	1	4. Modification of a landfill unit without changing a liner, leachate collection system, leachate detection system, run-off control, or final cover system	2
d. That are residues from wastewater treatment or incineration, provided that disposal occurs in a unit that meets the minimum technological requirements stated in Subsection R315-268-5(h)(2), and provided further that the surface impoundment has previously received wastes of the same type, for example, incinerator scrubber water. This modification is not applicable to dioxin-containing wastes, F020, 021, 022, 023, 026, 027, and 028	1	5. Modification of a landfill management practice	2
6. Modifications of unconstructed units to comply with Subsection R315-264-221(c) and 226(d), and Sections R315-264-222, and 223	1	6. Landfill different wastes:	
7. Changes in response action plan:		a. That require additional or different management practices, different design of the liner, leachate collection system, or leachate detection system	3
a. Increase in action leakage rate	3	b. That do not require additional or different management practices, different design of the liner, leachate collection system, or leachate detection system	2
b. Change in a specific response reducing its frequency or effectiveness	3	c. That are wastes restricted from land disposal that meet the applicable treatment standards or that are treated to satisfy the standard of "use of practically available technology that yields the greatest environmental benefit," and provided that the landfill unit meets the minimum technological requirements stated in Subsection R315-268-5(h)(2). This modification is not applicable to dioxin-containing wastes, F020, 021, 022, 023, 026, 027, and 028	1
c. Other changes	2	d. That are residues from wastewater treatment or incineration, provided that disposal occurs in a landfill unit that meets the minimum technological requirements stated in Subsection R315-268-5(h)(2), and provided further that the landfill has previously received wastes of the same type, for example, incinerator ash. This modification is not applicable to dioxin-containing wastes, F020, 021, 022, 023, 026, 027, and 028	1
Note: See Subsection R315-270-42(g) for modification procedures to be used for the management of newly listed or identified wastes.		7. Modifications of unconstructed units to comply with Subsection R315-264-251(c), Sections R315-264-252 and 253, Subsections R315-264-254(c) and R315-264-301(c), Section R315-264-302, Subsection R315-264-303(c), and Section R315-264-304	1
I. Enclosed Waste Piles. For all waste piles except those complying with Subsection R315-264-250(c), modifications are treated the same as for a landfill. The following modifications are applicable only to waste piles complying with Subsection R315-264-250(c).		8. Changes in response action plan:	
1. Modification or addition of waste pile units:		a. Increase in action leakage rate	3
a. Resulting in greater than 25% increase in the facility's waste pile storage or treatment capacity	3	b. Change in a specific response reducing its frequency or effectiveness	3
b. Resulting in up to 25% increase in the facility's waste pile storage or treatment capacity	2	c. Other changes	2
2. Modification of waste pile unit without increasing the capacity of the unit	2	Note: See Subsection R315-270-42(g) for modification procedures to be used for the management of newly listed or identified wastes.,	
		K. Land Treatment	
		1. Lateral expansion of or other modification of a land treatment unit to increase areal extent	3
		2. Modification of run-on control system	2
		3. Modify run-off control system	3
		4. Other modifications of land treatment unit component specifications or standards required in permit	2
		5. Management of different wastes in land treatment units:	
		a. That require a change in permit operating	3

conditions or unit design specifications			
b. That do not require a change in permit operating conditions or unit design specifications	2		
Note: See Subsection R315-270-42(g) for modification procedures to be used for the management of newly listed or identified wastes			
6. Modification of a land treatment unit management practice to:			
a. Increase rate or change method of waste application	3		
b. Decrease rate of waste application	1		
7. Modification of a land treatment unit management practice to change measures of pH or moisture content, or to enhance microbial or chemical reactions	2		
8. Modification of a land treatment unit management practice to grow food chain crops, to add to or replace existing permitted crops with different food chain crops, or to modify operating plans for distribution of animal feeds resulting from such crops	3		
9. Modification of operating practice due to detection of releases from the land treatment unit pursuant to Subsection R315-264-278(g)(2)	3		
10. Changes in the unsaturated zone monitoring system, resulting in a change to the location, depth, number of sampling points, or replace unsaturated zone monitoring devices or components of devices with devices or components that have specifications different from permit requirements	3		
11. Changes in the unsaturated zone monitoring system that do not result in a change to the location, depth, number of sampling points, or that replace unsaturated zone monitoring devices or components of devices with devices or components having specifications different from permit requirements	2		
12. Changes in background values for hazardous constituents in soil and soil-pore liquid	2		
13. Changes in sampling, analysis, or statistical procedure	2		
14. Changes in land treatment demonstration program prior to or during the demonstration	2		
15. Changes in any condition specified in the permit for a land treatment unit to reflect results of the land treatment demonstration, provided performance standards are met, and the Director's prior approval has been received	1		
16. Changes to allow a second land treatment demonstration to be conducted when the results of the first demonstration have not shown the conditions under which the wastes can be treated completely, provided the conditions for the second demonstration are substantially the same as the conditions for the first demonstration and have received the prior approval of the Director	1		
17. Changes to allow a second land treatment demonstration to be conducted when the results of the first demonstration have not shown the conditions under which the wastes can be treated completely, where the conditions for the second demonstration are not substantially the same as the conditions for the first demonstration	3		
18. Changes in vegetative cover requirements for closure	2		
L. Incinerators, Boilers, and Industrial Furnaces:			
1. Changes to increase by more than 25% any of the following limits authorized in the permit: A thermal feed rate limit, a feedstream feed rate limit, a chlorine/chloride feed rate limit, a metal feed rate limit, or an ash feed rate limit. The Director shall require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means	3		
2. Changes to increase by up to 25% any of the following limits authorized in the permit: A thermal feed rate limit, a feedstream feed rate limit, a chlorine/chloride feed rate limit, a metal feed rate limit, or an ash feed rate limit. The Director shall require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means	2		
3. Modification of an incinerator, boiler, or industrial furnace unit by changing the internal size or geometry of the primary or secondary combustion units, by adding a primary or secondary combustion unit, by substantially changing the design of any component used to remove HCl/Cl ₂ , metals, or particulate from the combustion gases, or by changing other features of the incinerator, boiler, or industrial furnace that could affect its capability to meet the regulatory performance standards. The Director shall require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means	3		
4. Modification of an incinerator, boiler, or industrial furnace unit in a manner that would not likely affect the capability of the unit to meet the regulatory performance standards but which would change the operating conditions or monitoring requirements specified in the permit. The Director may require a new trial burn to demonstrate compliance with the regulatory performance standards	2		
5. Operating requirements:			
a. Modification of the limits specified in the permit for minimum or maximum combustion gas temperature, minimum combustion gas residence time, oxygen concentration in the secondary combustion chamber, flue gas carbon monoxide and hydrocarbon concentration, maximum temperature at the inlet to the particulate matter emission control system, or operating parameters for the air pollution control system. The Director shall require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means	3		
b. Modification of any stack gas emission limits specified in the permit, or modification of any conditions in the permit concerning emergency shutdown or automatic waste feed cutoff procedures or controls	3		
c. Modification of any other operating condition or any inspection or recordkeeping requirement specified in the permit	2		
6. Burning different wastes:			
a. If the waste contains a POHC that is more difficult to burn than authorized by the permit or if burning of the waste requires compliance with different regulatory performance standards than specified in the permit. The Director shall require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means	3		
b. If the waste does not contain a POHC that is more difficult to burn than authorized by the permit and if burning of the waste does not require compliance with different regulatory performance standards than specified in the permit	2		
Note: See Subsection R315-270-42(g) for modification procedures to be used for the management of newly listed or identified wastes			
7. Shakedown and trial burn:			
a. Modification of the trial burn plan or any of the permit conditions applicable during the shakedown period for determining operational readiness after construction, the trial burn period, or the period immediately following the trial burn	2		
b. Authorization of up to an additional 720 hours of waste burning during the shakedown period for determining operational readiness after construction, with the prior approval of the Director	1		
c. Changes in the operating requirements set in the permit for conducting a trial burn, provided the change is minor and has received the prior approval of the Director	1		
d. Changes in the ranges of the operating	1		

- requirements set in the permit to reflect the results of the trial burn, provided the change is minor and has received the prior approval of the Director
8. Substitution of an alternative type of nonhazardous waste fuel that is not specified in the permit 1
 9. Technology changes needed to meet standards under 40 CFR part 63 (Subpart EEE-National Emission Standards for Hazardous Air Pollutants From Hazardous Waste Combustors), provided the procedures of Subsection R315-270-42(j) are followed. 1
 10. Changes to RCRA permit provisions needed to support transition to 40 CFR part 63 (Subpart EEE-National Emission Standards for Hazardous Air Pollutants From Hazardous Waste Combustors), provided the procedures of Subsection R315-270-42(k) are followed.
- M. Containment Buildings.
1. Modification or addition of containment building units:
 - a. Resulting in greater than 25% increase in the facility's containment building storage or treatment capacity 3
 - b. Resulting in up to 25% increase in the facility's containment building storage or treatment capacity 2
 2. Modification of a containment building unit or secondary containment system without increasing the capacity of the unit 2
 3. Replacement of a containment building with a containment building that meets the same design standards provided:
 - a. The unit capacity is not increased 1
 - b. The replacement containment building meets the same conditions in the permit 1
 4. Modification of a containment building management practice 2
 5. Storage or treatment of different wastes in containment buildings:
 - a. That require additional or different management practices 3
 - b. That do not require additional or different management practices 2
- N. Corrective Action:
1. Approval of a corrective action management unit pursuant to Section R315-264-552 3
 2. Approval of a temporary unit or time extension for a temporary unit pursuant to Section R315-264-553 2
 3. Approval of a staging pile or staging pile operating term extension pursuant to Section R315-264-554 2
- O. Burden Reduction
1. Reserved 1
 2. Development of one contingency plan based on Integrated Contingency Plan Guidance pursuant to Subsection R315-264-52(b) 1
 3. Changes to recordkeeping and reporting requirements pursuant to: Subsections R315-264-56(i), R315-264-343(a)(2), R315-264-1061(b)(1),(d), R315-264-1062(a)(2), R315-264-196(f), R315-264-100(g), and R315-264-113(e)(5) 1
 4. Changes to inspection frequency for tank systems pursuant to Subsection R315-264-195(b) 1
 5. Changes to detection and compliance monitoring program pursuant to Subsections R315-264-98(d), (g)(2), and (g)(3), R315-264-99(f), and (g) 1
- ¹Class 1 modifications requiring prior Agency approval.

R315-270-43. Hazardous Waste Permit Program -- Termination of Permits.

- (a) The following are causes for terminating a permit during its term, or for denying a permit renewal application:
- (1) Noncompliance by the permittee with any condition of the permit;
 - (2) The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time; or
 - (3) A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination.
- (b) The Director shall follow the applicable procedures in

Rule R315-124 in terminating any permit under Section R315-270-43.

R315-270-50. Hazardous Waste Permit Program -- Duration of Permits.

- (a) Hazardous Waste operation permits shall be effective for a fixed term not to exceed 10 years.
- (b) Except as provided in Section R315-270-51, the term of a permit shall not be extended by modification beyond the maximum duration specified in Section R315-270-50.
- (c) The Director may issue any permit for a duration that is less than the full allowable term under Section R315-270-50.
- (d) Each permit for a land disposal facility shall be reviewed by the Director five years after the date of permit issuance or reissuance and shall be modified as necessary, as provided in Section R315-270-41.

R315-270-51. Hazardous Waste Permit Program -- Continuation of Expiring Permits.

- (a) The conditions of an expired permit continue in force until the effective date of a new permit if:
- (1) The permittee has submitted a timely application under Section R315-270-14 and the applicable sections in Sections R315-270-15 through 29 which is a complete application for a new permit; and
 - (2) The Director through no fault of the permittee, does not issue a new permit with an effective date under Section R315-124-15 on or before the expiration date of the previous permit, for example, when issuance is impracticable due to time or resource constraints.
- (b) Effect. Permits continued under Section R315-270-51 remain fully effective and enforceable.
- (c) Enforcement. When the permittee is not in compliance with the conditions of the expiring or expired permit, the Director may choose to do any or all of the following:
- (1) Initiate enforcement action based upon the permit which has been continued;
 - (2) Issue a notice of intent to deny the new permit under Section R315-124-6. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;
 - (3) Issue a new permit under Rule R315-124 with appropriate conditions; or
 - (4) Take other actions authorized by these rules.
- (d) State continuation. If a permittee has submitted a timely and complete application under applicable State law and regulations, the terms and conditions of an EPA-issued RCRA permit continue in force beyond the expiration date of the permit, but only until the effective date of the State's issuance or denial of a State RCRA permit.

R315-270-60. Hazardous Waste Permit Program -- Permits by Rule.

Notwithstanding any other provision of Section R315-270-60 or Rule R315-124, the following shall be deemed to have a approved hazardous waste permit if the conditions listed are met:

- (a) Reserved
- (b) Injection wells. The owner or operator of an injection well disposing of hazardous waste, if the owner or operator:
 - (1) Has a permit for underground injection issued under Rule R317-7 and 40 CFR 144 or 145; and
 - (2) Complies with the conditions of that permit and the requirements of 40 CFR 144.14 and Section R317-7-11.
- (3) For UIC permits issued after November 8, 1984:
 - (i) Complies with Section R315-264-101; and
 - (ii) Where the UIC well is the only unit at a facility which requires a hazardous waste permit, complies with Subsection

R315-270-14(d).

(c) Publicly owned treatment works. The owner or operator of a POTW which accepts for treatment hazardous waste, if the owner or operator:

- (1) Has an NPDES permit;
- (2) Complies with the conditions of that permit; and
- (3) Complies with the following regulations:
 - (i) Section R315-264-11, Identification number;
 - (ii) Section R315-264-71, Use of manifest system;
 - (iii) Section R315-264-72, Manifest discrepancies;
 - (iv) Section R315-264-73(a) and (b)(1), Operating record;
 - (v) Section R315-264-75, Biennial report;
 - (vi) Section R315-264-76, Unmanifested waste report; and
 - (vii) For NPDES permits issued after November 8, 1984, Section R315-264-101.

(4) If the waste meets all Federal, State, and local pretreatment requirements which would be applicable to the waste if it were being discharged into the POTW through a sewer, pipe, or similar conveyance.

R315-270-61. Hazardous Waste Permit Program -- Emergency Permits.

(a) Notwithstanding any other provision of Rule R315-270 or Rule R315-124, in the event the Director finds an imminent and substantial endangerment to human health or the environment the Director may issue a temporary emergency permit:

(1) To a non-permitted facility to allow treatment, storage, or disposal of hazardous waste; or

(2) To a permitted facility to allow treatment, storage, or disposal of a hazardous waste not covered by an effective permit.

(b) This emergency permit:

(1) May be oral or written. If oral, it shall be followed in five days by a written emergency permit;

(2) Shall not exceed 90 days in duration;

(3) Shall clearly specify the hazardous wastes to be received, and the manner and location of their treatment, storage, or disposal;

(4) May be terminated by the Director at any time without process if the Director determines that termination is appropriate to protect human health and the environment;

(5) Shall be accompanied by a public notice published under Subsection R315-124-10(b) including:

(i) Name and address of the office granting the emergency authorization;

(ii) Name and location of the permitted hazardous waste management facility;

(iii) A brief description of the wastes involved;

(iv) A brief description of the action authorized and reasons for authorizing it; and

(v) Duration of the emergency permit; and

(6) Shall incorporate, to the extent possible and not inconsistent with the emergency situation, all applicable requirements of Rule R315-270 and Rules R315-264 and 266.

R315-270-62. Hazardous Waste Permit Program -- Hazardous Waste Incinerator Permits.

When an owner or operator of a hazardous waste incineration unit becomes subject to hazardous waste permit requirements after October 12, 2005, or when an owner or operator of an existing hazardous waste incineration unit demonstrates compliance with the air emission standards and limitations in Subsection R307-214-2(39), i.e., by conducting a comprehensive performance test and submitting a Notification of Compliance under 40 CFR 63.1207(j) and 63.1210(d), which are incorporated by reference in Subsection R307-214-2(39), documenting compliance with all applicable requirements of Subsection R307-214-2(39), the requirements of Section R315-

270-62 do not apply, except those provisions the Director determines are necessary to ensure compliance with Subsections R315-264-345(a) and (c) if the owner or operator elects to comply with Section R315-270-235(a)(1)(i) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. Nevertheless, the Director may apply the provisions of Section R315-270-62, on a case-by-case basis, for purposes of information collection in accordance with Subsections R315-270-10(k), 10(l), 32(b)(2), and 32(b)(3).

(a) For the purposes of determining operational readiness following completion of physical construction, the Director shall establish permit conditions, including but not limited to allowable waste feeds and operating conditions, in the permit to a new hazardous waste incinerator. These permit conditions shall be effective for the minimum time required to bring the incinerator to a point of operational readiness to conduct a trial burn, not to exceed 720 hours operating time for treatment of hazardous waste. The Director may extend the duration of this operational period once, for up to 720 additional hours, at the request of the applicant when good cause is shown. The permit may be modified to reflect the extension according to Section R315-270-42.

(1) Applicants shall submit a statement, with part B of the permit application, which suggests the conditions necessary to operate in compliance with the performance standards of Section R315-264-343 during this period. This statement should include, at a minimum, restrictions on waste constituents, waste feed rates and the operating parameters identified in Section R315-264-345.

(2) The Director shall review this statement and any other relevant information submitted with part B of the permit application and specify requirements for this period sufficient to meet the performance standards of Section R315-264-343.

(b) For the purposes of determining feasibility of compliance with the performance standards of Section R315-264-343 and of determining adequate operating conditions under Section R315-264-345, the Director shall establish conditions in the permit for a new hazardous waste incinerator to be effective during the trial burn.

(1) Applicants shall propose a trial burn plan, prepared under Subsection R315-270-62(b)(2) with a part B of the permit application.

(2) The trial burn plan shall include the following information:

(i) An analysis of each waste or mixture of wastes to be burned which includes:

(A) Heat value of the waste in the form and composition in which it will be burned.

(B) Viscosity (if applicable), or description of the physical form of the waste.

(C) An identification of any hazardous organic constituents listed in Rule R315-261, appendix VIII, which are present in the waste to be burned, except that the applicant need not analyze for constituents listed in Rule R315-261, appendix VIII, which would reasonably not be expected to be found in the waste. The constituents excluded from analysis shall be identified, and the basis for the exclusion stated. The waste analysis shall rely on appropriate analytical techniques.

(D) An approximate quantification of the hazardous constituents identified in the waste, within the precision produced by appropriate analytical methods.

(ii) A detailed engineering description of the incinerator for which the permit is sought including:

(A) Manufacturer's name and model number of incinerator, if available.

(B) Type of incinerator.

(C) Linear dimensions of the incinerator unit including the cross sectional area of combustion chamber.

(D) Description of the auxiliary fuel system, type/feed.

- (E) Capacity of prime mover.
- (F) Description of automatic waste feed cut-off system(s).
- (G) Stack gas monitoring and pollution control equipment.
- (H) Nozzle and burner design.
- (I) Construction materials.
- (J) Location and description of temperature, pressure, and flow indicating and control devices.
- (iii) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.
- (iv) A detailed test schedule for each waste for which the trial burn is planned including date(s), duration, quantity of waste to be burned, and other factors relevant to the Director's decision under Subsection R315-270-62(b)(5).
- (v) A detailed test protocol, including, for each waste identified, the ranges of temperature, waste feed rate, combustion gas velocity, use of auxiliary fuel, and any other relevant parameters that will be varied to affect the destruction and removal efficiency of the incinerator.
- (vi) A description of, and planned operating conditions for, any emission control equipment which will be used.
- (vii) Procedures for rapidly stopping waste feed, shutting down the incinerator, and controlling emissions in the event of an equipment malfunction.
- (viii) Such other information as the Director reasonably finds necessary to determine whether to approve the trial burn plan in light of the purposes of Subsection R315-270-62(b)(2) and the criteria in Subsection R315-270-62(b)(5).
- (3) The Director, in reviewing the trial burn plan, shall evaluate the sufficiency of the information provided and may require the applicant to supplement this information, if necessary, to achieve the purposes of Subsection R315-270-62(b)(2).
- (4) Based on the waste analysis data in the trial burn plan, the Director shall specify as trial Principal Organic Hazardous Constituents (POHCs), those constituents for which destruction and removal efficiencies shall be calculated during the trial burn. These trial POHCs shall be specified by the Director based on The Director's estimate of the difficulty of incineration of the constituents identified in the waste analysis, their concentration or mass in the waste feed, and, for wastes listed in Sections R315-261-30 through 35, the hazardous waste organic constituent or constituents identified in appendix VII of Rule R315-261 as the basis for listing.
- (5) The Director shall approve a trial burn plan if he finds that:
 - (i) The trial burn is likely to determine whether the incinerator performance standard required by Section R315-264-343 can be met;
 - (ii) The trial burn itself shall not present an imminent hazard to human health or the environment;
 - (iii) The trial burn will help the Director to determine operating requirements to be specified under Section R315-264-345; and
 - (iv) The information sought in Subsection R315-270-62(b)(5)(i) and (ii) cannot reasonably be developed through other means.
- (6) The Director shall send a notice to all persons on the facility mailing list as set forth in Subsection R315-124-10(c)(1)(ix) and to the appropriate units of State and local government as set forth in Subsection R315-124-10(c)(1)(x) announcing the scheduled commencement and completion dates for the trial burn. The applicant may not commence the trial burn until after the Director has issued such notice.
 - (i) This notice shall be mailed within a reasonable time period before the scheduled trial burn. An additional notice is not required if the trial burn is delayed due to circumstances

beyond the control of the facility or the permitting agency.

- (ii) This notice shall contain:
 - (A) The name and telephone number of the applicant's contact person;
 - (B) The name and telephone number of the permitting agency's contact office;
 - (C) The location where the approved trial burn plan and any supporting documents can be reviewed and copied; and
 - (D) An expected time period for commencement and completion of the trial burn.
- (7) During each approved trial burn, or as soon after the burn as is practicable, the applicant shall make the following determinations:
 - (i) A quantitative analysis of the trial POHCs in the waste feed to the incinerator.
 - (ii) A quantitative analysis of the exhaust gas for the concentration and mass emissions of the trial POHCs, oxygen (O₂) and hydrogen chloride (HCl).
 - (iii) A quantitative analysis of the scrubber water, if any; ash residues; and other residues, for the purpose of estimating the fate of the trial POHCs.
 - (iv) A computation of destruction and removal efficiency (DRE), in accordance with the DRE formula specified in Subsection R315-264-343(a).
 - (v) If the HCl emission rate exceeds 1.8 kilograms of HCl per hour, 4 pounds per hour, a computation of HCl removal efficiency in accordance with Subsection R315-264-343(b).
 - (vi) A computation of particulate emissions, in accordance with Subsection R315-264-343(c).
 - (vii) An identification of sources of fugitive emissions and their means of control.
 - (viii) A measurement of average, maximum, and minimum temperatures and combustion gas velocity.
 - (ix) A continuous measurement of carbon monoxide (CO) in the exhaust gas.
 - (x) Such other information as the Director may specify as necessary to ensure that the trial burn will determine compliance with the performance standards in Section R315-264-343 and to establish the operating conditions required by Section R315-264-345 as necessary to meet that performance standard.
- (8) The applicant shall submit to the Director a certification that the trial burn has been carried out in accordance with the approved trial burn plan, and shall submit the results of all the determinations required in Subsection R315-270-62(b)(6). This submission shall be made within 90 days of completion of the trial burn, or later if approved by the Director.
- (9) All data collected during any trial burn shall be submitted to the Director following the completion of the trial burn.
- (10) All submissions required by Subsection R315-270-62(b) shall be certified on behalf of the applicant by the signature of a person authorized to sign a permit application or a report under Section R315-270-11.
- (11) Based on the results of the trial burn, the Director shall set the operating requirements in the final permit according to Section R315-264-345. The permit modification shall proceed according to Section R315-270-42.
 - (c) For the purposes of allowing operation of a new hazardous waste incinerator following completion of the trial burn and prior to final modification of the permit conditions to reflect the trial burn results, the Director may establish permit conditions, including but not limited to allowable waste feeds and operating conditions sufficient to meet the requirements of Section R315-264-345, in the permit to a new hazardous waste incinerator. These permit conditions shall be effective for the minimum time required to complete sample analysis, data computation and submission of the trial burn results by the applicant, and modification of the facility permit by the

Director.

(1) Applicants shall submit a statement, with part B of the permit application, which identifies the conditions necessary to operate in compliance with the performance standards of Section R315-264-343 during this period. This statement should include, at a minimum, restrictions on waste constituents, waste feed rates, and the operating parameters in Section R315-264-345.

(2) The Director shall review this statement and any other relevant information submitted with part B of the permit application and specify those requirements for this period most likely to meet the performance standards of Section R315-264-34 based on his engineering judgment.

(d) For the purpose of determining feasibility of compliance with the performance standards of Section R315-264-343 and of determining adequate operating conditions under Section R315-264-345, the applicant for a permit for an existing hazardous waste incinerator shall prepare and submit a trial burn plan and perform a trial burn in accordance with Subsection R315-270-19(b) and Subsections R315-270-62(b)(2) through (b)(5) and (b)(7) through (b)(10) or, instead, submit other information as specified in Subsection R315-270-19(c). The Director shall announce the Director's intention to approve the trial burn plan in accordance with the timing and distribution requirements of Subsection R315-270-62(b)(6). The contents of the notice shall include: the name and telephone number of a contact person at the facility; the name and telephone number of a contact office at the permitting agency; the location where the trial burn plan and any supporting documents can be reviewed and copied; and a schedule of the activities that are required prior to permit issuance, including the anticipated time schedule for approval of the plan and the time period during which the trial burn would be conducted. Applicants submitting information under Subsection R315-270-19(a) are exempt from compliance with Sections R315-264-343 and 345 and, therefore, are exempt from the requirement to conduct a trial burn. Applicants who submit trial burn plans and receive approval before submission of a permit application shall complete the trial burn and submit the results, specified in Subsection R315-270-62(b)(7), with part B of the permit application. If completion of this process conflicts with the date set for submission of the part B application, the applicant shall contact the Director to establish a later date for submission of the part B application or the trial burn results. Trial burn results shall be submitted prior to issuance of the permit. When the applicant submits a trial burn plan with part B of the permit application, the Director shall specify a time period prior to permit issuance in which the trial burn shall be conducted and the results submitted.

R315-270-63. Hazardous Waste Permit Program -- Permits for Land Treatment Demonstrations Using Field Test or Laboratory Analyses.

(a) For the purpose of allowing an owner or operator to meet the treatment demonstration requirements of Section R315-264-272, the Director may issue a treatment demonstration permit. The permit shall contain only those requirements necessary to meet the standards in Subsection R315-264-272(c). The permit may be issued either as a treatment or disposal permit covering only the field test or laboratory analyses, or as a two-phase facility permit covering the field tests, or laboratory analyses, and design, construction operation and maintenance of the land treatment unit.

(1) The Director may issue a two-phase facility permit if the Director finds that, based on information submitted in part B of the application, substantial, although incomplete or inconclusive, information already exists upon which to base the issuance of a facility permit.

(2) If the Director finds that not enough information exists

upon which the Director can establish permit conditions to attempt to provide for compliance with all of the requirements of Sections R315-264-270 through 283, he shall issue a treatment demonstration permit covering only the field test or laboratory analyses.

(b) If the Director finds that a phased permit may be issued, the Director shall establish, as requirements in the first phase of the facility permit, conditions for conducting the field tests or laboratory analyses. These permit conditions shall include design and operating parameters, including the duration of the tests or analyses and, in the case of field tests, the horizontal and vertical dimensions of the treatment zone; monitoring procedures; post-demonstration clean-up activities; and any other conditions which the Director finds may be necessary under Subsection R315-264-272(c). The Director shall include conditions in the second phase of the facility permit to attempt to meet all Sections R315-264-270 through 283 requirements pertaining to unit design, construction, operation, and maintenance. The Director shall establish these conditions in the second phase of the permit based upon the substantial but incomplete or inconclusive information contained in the part B application.

(1) The first phase of the permit shall be effective as provided in Subsection R315-124-15(b).

(2) The second phase of the permit shall be effective as provided in Subsection R315-270-63(d).

(c) When the owner or operator who has been issued a two-phase permit has completed the treatment demonstration, the owner or operator shall submit to the Director a certification, signed by a person authorized to sign a permit application or report under Section R315-270-11, that the field tests or laboratory analyses have been carried out in accordance with the conditions specified in phase one of the permit for conducting such tests or analyses. The owner or operator shall also submit all data collected during the field tests or laboratory analyses within 90 days of completion of those tests or analyses unless the Director approves a later date.

(d) If the Director determines that the results of the field tests or laboratory analyses meet the requirements of Section R315-264-272, the Director shall modify the second phase of the permit to incorporate any requirements necessary for operation of the facility in compliance with Sections R315-264-270 through 283, based upon the results of the field tests or laboratory analyses.

(1) This permit modification may proceed under Section R315-270-42, or otherwise shall proceed as a modification under Subsection R315-270-41(a)(2). If such modifications are necessary, the second phase of the permit shall become effective only after those modifications have been made.

(2) If no modifications of the second phase of the permit are necessary, the Director shall give notice of the final decision to the permit applicant and to each person who submitted written comments on the phased permit or who requested notice of the final decision on the second phase of the permit. The second phase of the permit then will become effective as specified in Subsection R315-124-15(b).

R315-270-65. Hazardous Waste Permit Program -- Research, Development, and Demonstration Permits.

(a) The Director may issue a research, development, and demonstration permit for any hazardous waste treatment facility which proposes to utilize an innovative and experimental hazardous waste treatment technology or process for which permit standards for such experimental activity have not been promulgated under Rules R315-264 or 266. Any such permit shall include such terms and conditions as will assure protection of human health and the environment. Such permits:

(1) Shall provide for the construction of such facilities as necessary, and for operation of the facility for not longer than

one year unless renewed as provided in Subsection R315-270-64(d), and

(2) Shall provide for the receipt and treatment by the facility of only those types and quantities of hazardous waste which the Director deems necessary for purposes of determining the efficacy and performance capabilities of the technology or process and the effects of such technology or process on human health and the environment, and

(3) Shall include such requirements as the Director deems necessary to protect human health and the environment, including, but not limited to, requirements regarding monitoring, operation, financial responsibility, closure, and remedial action, and such requirements as the Director deems necessary regarding testing and providing of information to the Director with respect to the operation of the facility.

(b) For the purpose of expediting review and issuance of permits under Section R315-270-65, the Director may, consistent with the protection of human health and the environment, modify or waive permit application and permit issuance requirements in Rules R315-124 and 270 except that there may be no modification or waiver of regulations regarding financial responsibility, including insurance, or of procedures regarding public participation.

(c) The Director may order an immediate termination of all operations at the facility at any time the Director determines that termination is necessary to protect human health and the environment.

(d) Any permit issued under Section R315-270-65 may be renewed not more than three times. Each such renewal shall be for a period of not more than 1 year.

R315-270-66. Hazardous Waste Permit Program -- Permits for Boilers and Industrial Furnaces Burning Hazardous Waste.

When an owner or operator of a cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace becomes subject to the hazardous waste permit requirements after October 12, 2005 or when an owner or operator of an existing cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace demonstrates compliance with the air emission standards and limitations in Subsection R307-214-2(39), i.e., by conducting a comprehensive performance test and submitting a Notification of Compliance under 40 CFR 63.1207(j) and 63.1210(d) which are incorporated by reference in R307-214-2(39) documenting compliance with all applicable requirements of Subsection R307-214-2(39), the requirements of Section R315-270-66 do not apply. The requirements of Section R315-270-66 do apply, however, if the Director determines certain provisions are necessary to ensure compliance with Subsections R315-266-102(e)(1) and 102(e)(2)(iii) if owners and operators elect to comply with Subsection R315-270-235(a)(1)(i) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events; or if you are an area source and elect to comply with the Sections R315-266-105, 106, and 107 standards and associated requirements for particulate matter, hydrogen chloride and chlorine gas, and non-mercury metals; or the Director determines certain provisions apply, on a case-by-case basis, for purposes of information collection in accordance with Subsections R315-270-10(k), 10(l), 32(b)(2), and 32(b)(3).

(a) General. Owners and operators of new boilers and industrial furnaces, those not operating under the interim status standards of Section R315-266-103, are subject to Subsections R315-270-66(b) through (f). Boilers and industrial furnaces operating under the interim status standards of Section R315-266-103 are subject to Subsection R315-270-66(g).

(b) Permit operating periods for new boilers and industrial furnaces. A permit for a new boiler or industrial furnace shall

specify appropriate conditions for the following operating periods:

(1) Pretrial burn period. For the period beginning with initial introduction of hazardous waste and ending with initiation of the trial burn, and only for the minimum time required to bring the boiler or industrial furnace to a point of operational readiness to conduct a trial burn, not to exceed 720 hours operating time when burning hazardous waste, the Director shall establish in the Pretrial Burn Period of the permit conditions, including but not limited to, allowable hazardous waste feed rates and operating conditions. The Director may extend the duration of this operational period once, for up to 720 additional hours, at the request of the applicant when good cause is shown. The permit may be modified to reflect the extension according to Section R315-270-42.

(i) Applicants shall submit a statement, with part B of the permit application that suggests the conditions necessary to operate in compliance with the standards of Sections R315-266-104 through 107 during this period. This statement should include, at a minimum, restrictions on the applicable operating requirements identified in Subsection R315-266-102(e).

(ii) The Director shall review this statement and any other relevant information submitted with part B of the permit application and specify requirements for this period sufficient to meet the performance standards of Sections R315-266-104 through 107.

(2) Trial burn period. For the duration of the trial burn, the Director shall establish conditions in the permit for the purposes of determining feasibility of compliance with the performance standards of Sections R315-266-104 through 107 and determining adequate operating conditions under Subsection R315-266-102(e). Applicants shall propose a trial burn plan, prepared under Subsection R315-270-66(c), to be submitted with part B of the permit application.

(3) Post-trial burn period.

(i) For the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis, data computation, and submission of the trial burn results by the applicant, and review of the trial burn results and modification of the facility permit by the Director to reflect the trial burn results, the Director shall establish the operating requirements most likely to ensure compliance with the performance standards of Sections R315-266-104 through 107.

(ii) Applicants shall submit a statement, with part B of the application that identifies the conditions necessary to operate during this period in compliance with the performance standards of Sections R315-266-104 through 107. This statement should include, at a minimum, restrictions on the operating requirements provided by Subsection R315-266-102(e).

(iii) The Director shall review this statement and any other relevant information submitted with part B of the permit application and specify requirements for this period sufficient to meet the performance standards of Sections R315-266-104 through 107.

(4) Final permit period. For the final period of operation, the Director shall develop operating requirements in conformance with Subsection R315-266-102(e) that reflect conditions in the trial burn plan and are likely to ensure compliance with the performance standards of Sections R315-266-104 through 107. Based on the trial burn results, the Director shall make any necessary modifications to the operating requirements to ensure compliance with the performance standards. The permit modification shall proceed according to Section R315-270-42.

(c) Requirements for trial burn plans. The trial burn plan shall include the following information. The Director, in reviewing the trial burn plan, shall evaluate the sufficiency of the information provided and may require the applicant to supplement this information, if necessary, to achieve the

purposes of Subsections R315-270-66(c)(1) through (9):

(1) An analysis of each feed stream, including hazardous waste, other fuels, and industrial furnace feed stocks, as fired, that includes:

(i) Heating value, levels of antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, thallium, total chlorine/chloride, and ash;

(ii) Viscosity or description of the physical form of the feed stream;

(2) An analysis of each hazardous waste, as fired, including:

(i) An identification of any hazardous organic constituents listed in appendix VIII, of Rule R315-261, that are present in the feed stream, except that the applicant need not analyze for constituents listed in appendix VIII that would reasonably not be expected to be found in the hazardous waste. The constituents excluded from analysis shall be identified and the basis for this exclusion explained. The waste analysis shall be conducted in accordance with appropriate analytical techniques.

(ii) An approximate quantification of the hazardous constituents identified in the hazardous waste, within the precision produced by appropriate analytical methods.

(iii) A description of blending procedures, if applicable, prior to firing the hazardous waste, including a detailed analysis of the hazardous waste prior to blending, an analysis of the material with which the hazardous waste is blended, and blending ratios.

(3) A detailed engineering description of the boiler or industrial furnace, including:

(i) Manufacturer's name and model number of the boiler or industrial furnace;

(ii) Type of boiler or industrial furnace;

(iii) Maximum design capacity in appropriate units;

(iv) Description of the feed system for the hazardous waste, and, as appropriate, other fuels and industrial furnace feedstocks;

(v) Capacity of hazardous waste feed system;

(vi) Description of automatic hazardous waste feed cutoff system(s);

(vii) Description of any air pollution control system; and

(viii) Description of stack gas monitoring and any pollution control monitoring systems.

(4) A detailed description of sampling and monitoring procedures including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

(5) A detailed test schedule for each hazardous waste for which the trial burn is planned, including date(s), duration, quantity of hazardous waste to be burned, and other factors relevant to the Director's decision under Subsection R315-270-66(b)(2).

(6) A detailed test protocol, including, for each hazardous waste identified, the ranges of hazardous waste feed rate, and, as appropriate, the feed rates of other fuels and industrial furnace feedstocks, and any other relevant parameters that may affect the ability of the boiler or industrial furnace to meet the performance standards in Sections R315-266-104 through 107.

(7) A description of, and planned operating conditions for, any emission control equipment that will be used.

(8) Procedures for rapidly stopping the hazardous waste feed and controlling emissions in the event of an equipment malfunction.

(9) Such other information as the Director reasonably finds necessary to determine whether to approve the trial burn plan in light of the purposes of Section R315-270-66(c) and the criteria in Subsection R315-270-66(b)(2).

(d) Trial burn procedures.

(1) A trial burn shall be conducted to demonstrate

conformance with the standards of Sections R315-266-104 through 107 under an approved trial burn plan.

(2) The Director shall approve a trial burn plan if the Director finds that:

(i) The trial burn is likely to determine whether the boiler or industrial furnace can meet the performance standards of Sections R315-266-104 through 107;

(ii) The trial burn itself shall not present an imminent hazard to human health and the environment;

(iii) The trial burn will help the Director to determine operating requirements to be specified under Subsection R315-266-102(e); and

(iv) The information sought in the trial burn cannot reasonably be developed through other means.

(3) The Director shall send a notice to all persons on the facility mailing list as set forth in Subsection R315-124-10(c)(1)(ix) and to the appropriate units of State and local government as set forth in Subsection R315-124-10(c)(1)(x) announcing the scheduled commencement and completion dates for the trial burn. The applicant may not commence the trial burn until after the Director has issued such notice.

(i) This notice shall be mailed within a reasonable time period before the trial burn. An additional notice is not required if the trial burn is delayed due to circumstances beyond the control of the facility or the Director.

(ii) This notice shall contain:

(A) The name and telephone number of applicant's contact person;

(B) The name and telephone number of the Division;

(C) The location where the approved trial burn plan and any supporting documents can be reviewed and copied; and

(D) An expected time period for commencement and completion of the trial burn.

(4) The applicant shall submit to the Director a certification that the trial burn has been carried out in accordance with the approved trial burn plan, and shall submit the results of all the determinations required in Subsection R315-270-66(c). This submission shall be made within 90 days of completion of the trial burn, or later if approved by the Director.

(5) All data collected during any trial burn shall be submitted to the Director following completion of the trial burn.

(6) All submissions required by Subsection R315-270-66(d) shall be certified on behalf of the applicant by the signature of a person authorized to sign a permit application or a report under Section R315-270-11.

(e) Special procedures for DRE trial burns. When a DRE trial burn is required under Subsection R315-266-104(a), the Director shall specify, based on the hazardous waste analysis data and other information in the trial burn plan, as trial Principal Organic Hazardous Constituents (POHCs) those compounds for which destruction and removal efficiencies shall be calculated during the trial burn. These trial POHCs shall be specified by the Director based on information including the Director's estimate of the difficulty of destroying the constituents identified in the hazardous waste analysis, their concentrations or mass in the hazardous waste feed, and, for hazardous waste containing or derived from wastes listed in Sections R315-261-30 through 35, the hazardous waste organic constituent(s) identified in Appendix VII of Rule R315-261 as the basis for listing.

(f) Determinations based on trial burn. During each approved trial burn, or as soon after the burn as is practicable, the applicant shall make the following determinations:

(1) A quantitative analysis of the levels of antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, thallium, silver, and chlorine/chloride, in the feed streams; hazardous waste, other fuels, and industrial furnace feedstocks;

(2) When a DRE trial burn is required under Subsection

R315-266-104(a):

(i) A quantitative analysis of the trial POHCs in the hazardous waste feed;

(ii) A quantitative analysis of the stack gas for the concentration and mass emissions of the trial POHCs; and

(iii) A computation of destruction and removal efficiency (DRE), in accordance with the DRE formula specified in Subsection R315-266-104(a);

(3) When a trial burn for chlorinated dioxins and furans is required under Subsection R315-266-104(e), a quantitative analysis of the stack gas for the concentration and mass emission rate of the 2,3,7,8-chlorinated tetra-octa congeners of chlorinated dibenzo-p-dioxins and furans, and a computation showing conformance with the emission standard;

(4) When a trial burn for particulate matter, metals, or HCl/Cl₂ is required under Section R315-266-105, or Subsections R315-266-106(c) or (d), or Subsections R315-266-107(b)(2) or (c), a quantitative analysis of the stack gas for the concentrations and mass emissions of particulate matter, metals, or hydrogen chloride (HCl) and chlorine (Cl₂), and computations showing conformance with the applicable emission performance standards;

(5) When a trial burn for DRE, metals, or HCl/Cl₂ is required under Subsections R315-266-104(a), 106(c) or (d), or 107(b)(2) or (c), a quantitative analysis of the scrubber water, if any; ash residues; other residues; and products for the purpose of estimating the fate of the trial POHCs, metals, and chlorine/chloride;

(6) An identification of sources of fugitive emissions and their means of control;

(7) A continuous measurement of carbon monoxide (CO), oxygen, and where required, hydrocarbons (HC), in the stack gas; and

(8) Such other information as the Director may specify as necessary to ensure that the trial burn shall determine compliance with the performance standards in Sections R315-266-104 through 107 and to establish the operating conditions required by Subsection R315-266-102(e) as necessary to meet those performance standards.

(g) Interim status boilers and industrial furnaces. For the purpose of determining feasibility of compliance with the performance standards of Sections R315-266-104 through 107 and of determining adequate operating conditions under Section R315-266-103, applicants owning or operating existing boilers or industrial furnaces operated under the interim status standards of Section R315-266-103 shall either prepare and submit a trial burn plan and perform a trial burn in accordance with the requirements of Section R315-270-66 or submit other information as specified in Subsection R315-270-22(a)(6). The Director shall announce the Director's intention to approve of the trial burn plan in accordance with the timing and distribution requirements of Subsection R315-270-66(d)(3). The contents of the notice shall include: the name and telephone number of a contact person at the facility; the name and telephone number of a contact office at the Division; the location where the trial burn plan and any supporting documents can be reviewed and copied; and a schedule of the activities that are required prior to permit issuance, including the anticipated time schedule for Director approval of the plan and the time periods during which the trial burn would be conducted. Applicants who submit a trial burn plan and receive approval before submission of the part B permit application shall complete the trial burn and submit the results specified in Subsection R315-270-66(f) with the part B permit application. If completion of this process conflicts with the date set for submission of the part B application, the applicant shall contact the Director to establish a later date for submission of the part B application or the trial burn results. If the applicant submits a trial burn plan with part B of the permit application, the trial burn shall be conducted and

the results submitted within a time period prior to permit issuance to be specified by the Director.

R315-270-68. Hazardous Waste Permit Program -- Remedial Action Plans (RAPs).

Remedial Action Plans (RAPs) are special forms of permits that are regulated under Sections R315-270-79 through 230.

R315-270-70. Hazardous Waste Permit Program -- Qualifying for Interim Status.

(a) Any person who owns or operates an "existing hazardous waste management facility" or a facility in existence on the effective date of statutory or regulatory amendments under the State or Federal Act that render the facility subject to the requirement to have a hazardous waste permit shall have interim status and shall be treated as having been issued a permit to the extent the owner or operator has:

(1) Complied with the requirements of section 3010(a) of RCRA pertaining to notification of hazardous waste activity or the notification requirements of Rules R315-260 through 266, 268 and 270.

Comment: Some existing facilities may not be required to file a notification under section 3010(a) of RCRA. These facilities may qualify for interim status by meeting Subsection R315-270-70(a)(2).

(2) Complied with the requirements of Section R315-270-10 governing submission of part A applications;

(b) Failure to qualify for interim status. If the Director has reason to believe upon examination of a part A application that it fails to meet the requirements of Section R315-270-13, the Director shall notify the owner or operator in writing of the apparent deficiency. Such notice shall specify the grounds for the Director's belief that the application is deficient. The owner or operator shall have 30 days from receipt to respond to such a notification and to explain or cure the alleged deficiency in the owner or operator's part A application. If, after such notification and opportunity for response, the Director determines that the application is deficient the Director may take appropriate enforcement action.

(c) Subsection R315-270-70(a) shall not apply to any facility which has been previously denied a hazardous waste permit or if authority to operate the facility under Federal or State authority has been previously terminated.

R315-270-71. Hazardous Waste Permit Program -- Operation During Interim Status.

(a) During the interim status period the facility shall not:

(1) Treat, store, or dispose of hazardous waste not specified in part A of the permit application;

(2) Employ processes not specified in part A of the permit application; or

(3) Exceed the design capacities specified in part A of the permit application.

(b) Interim status standards. During interim status, owners or operators shall comply with the interim status standards at Rule R315-265.

R315-270-72. Hazardous Waste Permit Program -- Changes During Interim Status.

(a) Except as provided in Subsection R315-270-72(b), the owner or operator of an interim status facility may make the following changes at the facility:

(1) Treatment, storage, or disposal of new hazardous wastes not previously identified in part A of the permit application and, in the case of newly listed or identified wastes, addition of the units being used to treat, store, or dispose of the hazardous wastes on the effective date of the listing or identification if the owner or operator submits a revised part A permit application prior to such treatment, storage, or disposal;

(2) Increases in the design capacity of processes used at the facility if the owner or operator submits a revised part A permit application prior to such a change, along with a justification explaining the need for the change, and the Director approves the changes because:

(i) There is a lack of available treatment, storage, or disposal capacity at other hazardous waste management facilities, or

(ii) The change is necessary to comply with a Federal, State, or local requirement.

(3) Changes in the processes for the treatment, storage, or disposal of hazardous waste or addition of processes if the owner or operator submits a revised part A permit application prior to such change, along with a justification explaining the need for the change, and the Director approves the change because:

(i) The change is necessary to prevent a threat to human health and the environment because of an emergency situation, or

(ii) The change is necessary to comply with a Federal, State, or local requirement.

(4) Changes in the ownership or operational control of a facility if the new owner or operator submits a revised part A permit application no later than 90 days prior to the scheduled change. When a transfer of operational control of a facility occurs, the old owner or operator shall comply with the requirements of Sections R315-265-140 through 150, until the new owner or operator has demonstrated to the Director that the owner or operator is complying with the requirements of Sections R315-265-140 through 150. The new owner or operator shall demonstrate compliance with Sections R315-265-140 through 150 within six months of the date of the change in ownership or operational control of the facility. Upon demonstration to the Director by the new owner or operator of compliance with Sections R315-265-140 through 150, the Director shall notify the old owner or operator in writing that he no longer needs to comply with Sections R315-265-140 through 150 as of the date of demonstration. All other interim status duties are transferred effective immediately upon the date of the change in ownership or operational control of the facility.

(5) Changes made in accordance with an interim status corrective action order issued under Subsection 19-6-105(d) or by EPA under section 3008(h) or other Federal authority, or by a court in a judicial action brought by EPA or by an authorized State. Changes under Subsection R315-270-72(a)(5) are limited to the treatment, storage, or disposal of solid waste from releases that originate within the boundary of the facility.

(6) Addition of newly regulated units for the treatment, storage, or disposal of hazardous waste if the owner or operator submits a revised part A permit application on or before the date on which the unit becomes subject to the new requirements.

(b) Except as specifically allowed under Subsection R315-270-72(b), changes listed under Subsection R315-270-72(a) may not be made if they amount to reconstruction of the hazardous waste management facility. Reconstruction occurs when the capital investment in the changes to the facility exceeds 50 percent of the capital cost of a comparable entirely new hazardous waste management facility. If all other requirements are met, the following changes may be made even if they amount to a reconstruction:

(1) Changes made solely for the purposes of complying with the requirements of Section R315-265-193 for tanks and ancillary equipment.

(2) If necessary to comply with Federal, State, or local requirements, changes to an existing unit, changes solely involving tanks or containers, or addition of replacement surface impoundments that satisfy the standards of section 3004(o).

(3) Changes that are necessary to allow owners or operators to continue handling newly listed or identified

hazardous wastes that have been treated, stored, or disposed of at the facility prior to the effective date of the rule establishing the new listing or identification.

(4) Changes during closure of a facility or of a unit within a facility made in accordance with an approved closure plan.

(5) Changes necessary to comply with an interim status corrective action order issued under Subsection 19-6-105(d), or by EPA under section 3008(h) or other Federal authority, or by a court in a judicial proceeding brought by EPA or an authorized State, provided that such changes are limited to the treatment, storage, or disposal of solid waste from releases that originate within the boundary of the facility.

(6) Changes to treat or store, in tanks, containers, or containment buildings, hazardous wastes subject to land disposal restrictions imposed by Rule R315-268 or RCRA section 3004, provided that such changes are made solely for the purpose of complying with Rule R315-268 or RCRA section 3004.

(7) Addition of newly regulated units under Subsection R315-27-72(a)(6).

(8) Changes necessary to comply with standards under 40 CFR part 63, Subpart EEE-National Emission Standards for Hazardous Air Pollutants From Hazardous Waste Combustors, which is incorporated by reference in Subsection R307-214-2(39).

R315-270-73. Hazardous Waste Permit Program -- Termination of Interim Status.

Interim status terminates when:

(a) Final administrative disposition of a permit application, except an application for a remedial action plan (RAP) under Sections R315-270-79 through 230 is made.

(b) Interim status is terminated as provided in Subsection R315-270-10(e)(5).

(c) For owners or operators of each land disposal facility which has been granted interim status prior to November 8, 1984, on November 8, 1985, unless:

(1) The owner or operator submits a part B application for a permit for such facility prior to that date; and

(2) The owner or operator certifies that such facility is in compliance with all applicable ground-water monitoring and financial responsibility requirements.

(d) For owners or operators of each land disposal facility which is in existence on the effective date of statutory or regulatory amendments under the Federal Act, or Section 19-6-108, that render the facility subject to the requirement to have a hazardous waste permit and which is granted interim status, twelve months after the date on which the facility first becomes subject to such permit requirement unless the owner or operator of such facility:

(1) Submits a part B application for a hazardous waste permit for such facility before the date 12 months after the date on which the facility first becomes subject to such permit requirement; and

(2) Certifies that such facility is in compliance with all applicable ground water monitoring and financial responsibility requirements.

(e) For owners or operators of any land disposal unit that is granted authority to operate under Subsections R315-270-72(a) (1), (2) or (3), on the date 12 months after the effective date of such requirement, unless the owner or operator certifies that such unit is in compliance with all applicable ground-water monitoring and financial responsibility requirements.

(f) For owners and operators of each incinerator facility which has achieved interim status prior to November 8, 1984, interim status terminates on November 8, 1989, unless the owner or operator of the facility submits a part B application for a hazardous waste permit for an incinerator facility by November 8, 1986.

(g) For owners or operators of any facility, other than a land disposal or an incinerator facility, which has achieved interim status prior to November 8, 1984, interim status terminates on November 8, 1992, unless the owner or operator of the facility submits a part B application for a hazardous waste permit for the facility by November 8, 1988.

R315-270-79. Hazardous Waste Permit Program -- Why Sections R315-79 through 230 Written In A Special Format?

Sections R315-270-79 through 230 are written in a special format to make it easier to understand the regulatory requirements. Like other rules adopted the Board, this establishes enforceable legal requirements. For Sections R315-270-79 through 230, "I" and "you" refer to the owner/operator.

R315-270-80. Hazardous Waste Permit Program -- What is a RAP?

(a) A RAP is a special form of hazardous waste permit that you, as an owner or operator, may obtain, instead of a permit issued under Sections R315-270-3 through 66, to authorize you to treat, store, or dispose of hazardous remediation waste, as defined in Section R315-260-10, at a remediation waste management site. A RAP may only be issued for the area of contamination where the remediation wastes to be managed under the RAP originated, or areas in close proximity to the contaminated area, except as allowed in limited circumstances under Section R315-270-230.

(b) The requirements in Sections R315-270-3 through 66 do not apply to RAPs unless those requirements for traditional permits are specifically required under Sections R315-270-80 through 230. The definitions in Section R315-270-2 apply to RAPs.

(c) Notwithstanding any other provision of Rule R315-270 or Rule R315-124, any document that meets the requirements in Section R315-270-80 constitutes a hazardous waste permit Section 19-6-108.

(d) A RAP may be:

(1) A stand-alone document that includes only the information and conditions required by Sections R315-270-79 through 230; or

(2) Part, or parts, of another document that includes information and/or conditions for other activities at the remediation waste management site, in addition to the information and conditions required by Sections R315-270-79 through 230.

(e) If you are treating, storing, or disposing of hazardous remediation wastes as part of a cleanup compelled by Federal or State cleanup authorities, your RAP does not affect your obligations under those authorities in any way.

(f) If you receive a RAP at a facility operating under interim status, the RAP does not terminate your interim status.

R315-270-85. Hazardous Waste Permit Program -- When Do I Need a Rap?

(a) Whenever you treat, store, or dispose of hazardous remediation wastes in a manner that requires a permit under Section R315-270-1, you shall either obtain:

(1) A permit according to Sections R315-270-3 through 66; or

(2) A RAP according to Sections R315-270-79 through 230.

(b) Treatment units that use combustion of hazardous remediation wastes at a remediation waste management site are not eligible for RAPs under Sections R315-270-79 through 230.

(c) You may obtain a RAP for managing hazardous remediation waste at an already permitted hazardous waste facility. You shall have these RAPs approved as a modification to your existing permit according to the requirements of Section R315-270-41 or 42 instead of the requirements in Sections

R315-270-79 through 230. When you submit an application for such a modification, however, the information requirements in Subsections R315-270-42(a)(1)(i), (b)(1)(iv), and (c)(1)(iv) do not apply; instead, you shall submit the information required under Section R315-270-110. When your permit is modified the RAP becomes part of the hazardous waste permit. Therefore when your permit, including the RAP portion, is modified, revoked and reissued, terminated or when it expires, it will be modified according to the applicable requirements in Sections R315-270-40 through 42, revoked and reissued according to the applicable requirements in Sections R315-270-41 and 43, terminated according to the applicable requirements in Section R315-270-43, and expire according to the applicable requirements in Sections R315-270-50 and 51.

R315-270-90. Hazardous Waste Permit Program -- Does My Rap Grant Me Any Rights or Relieve Me of Any Obligations?

The provisions of Section R315-270-4 apply to RAPs. Note: The provisions of Subsection R315-270-4(a) provide you assurance that, as long as you comply with your RAP, the Director shall consider you in compliance with the rules adopted under Sections 19-6-101 through 125, and will not take enforcement actions against you. However, you should be aware of four exceptions to this provision that are listed in Section R315-270-4.

R315-270-95. Hazardous Waste Permit Program -- How Do I Apply for a Rap?

To apply for a RAP, you shall complete an application, sign it, and submit it to the Director according to the requirements in Sections R315-270-79 through 230.

R315-270-100. Hazardous Waste Permit Program -- Who Shall Obtain a Rap?

When a facility or remediation waste management site is owned by one person, but the treatment, storage or disposal activities are operated by another person, it is the operator's duty to obtain a RAP, except that the owner shall also sign the RAP application.

R315-270-105. Hazardous Waste Permit Program -- Who Shall Sign the Application and Any Required Reports for a Rap?

Both the owner and the operator shall sign the RAP application and any required reports according to Subsections R315-270-11(a), (b), and (c). In the application, both the owner and the operator shall also make the certification required under Subsection R315-270-11(d)(1). However, the owner may choose the alternative certification under Subsection R315-270-11(d)(2) if the operator certifies under Subsection R315-270-11(d)(1).

R315-270-110. Hazardous Waste Permit Program -- What Shall I Include in My Application for a Rap?

You shall include the following information in your application for a RAP:

(a) The name, address, and EPA identification number of the remediation waste management site;

(b) The name, address, and telephone number of the owner and operator;

(c) The latitude and longitude of the site;

(d) The United States Geological Survey (USGS) or county map showing the location of the remediation waste management site;

(e) A scaled drawing of the remediation waste management site showing:

(1) The remediation waste management site boundaries;

(2) Any significant physical structures; and

(3) The boundary of all areas on-site where remediation waste is to be treated, stored or disposed;

(f) A specification of the hazardous remediation waste to be treated, stored or disposed of at the facility or remediation waste management site. This shall include information on:

(1) Constituent concentrations and other properties of the hazardous remediation wastes that may affect how such materials should be treated and/or otherwise managed;

(2) An estimate of the quantity of these wastes; and

(3) A description of the processes you will use to treat, store, or dispose of this waste including technologies, handling systems, design and operating parameters you will use to treat hazardous remediation wastes before disposing of them according to the LDR standards of Rule R315-268, as applicable;

(g) Enough information to demonstrate that operations that follow the provisions in your RAP application will ensure compliance with applicable requirements of Rules R315-264, 266, and 268;

(h) Such information as may be necessary to enable the Director to carry out his duties as is required for permits under Subsection R315-270-14(b)(20);

(i) Any other information the Director decides is necessary for demonstrating compliance with Sections R315-270-79 through 230 or for determining any additional RAP conditions that are necessary to protect human health and the environment.

R315-270-115. Hazardous Waste Permit Program -- What If I Want to Keep This Information Confidential?

Sections 63G-2-101 through 901 allows you to claim as confidential any or all of the information you submit to the Director under Sections R315-270-79 through 230. You shall assert any such claim by following the requirements of Section 63G-2-309. If you do assert a claim at the time you submit the information, the Director shall treat the information according to the procedures in Sections 63G-2-101 through 901. If you do not assert a claim at the time you submit the information, the Director may make the information available to the public without further notice to you. The Director shall deny any requests for confidentiality of your name and/or address.

R315-270-120. Hazardous Waste Permit Program -- To Whom Shall I Submit My Rap Application?

You shall submit your application for a RAP to the Director for approval.

R315-270-125. Hazardous Waste Permit Program -- If I Submit My Rap Application as Part of Another Document, What Shall I Do?

If you submit your application for a RAP as a part of another document, you shall clearly identify the components of that document that constitute your RAP application.

R315-270-130. Hazardous Waste Permit Program -- What Is the Process for Approving or Denying My Application for a Rap?

(a) If the Director tentatively finds that your RAP application includes all of the information required by Section R315-270-110 and that your proposed remediation waste management activities meet the regulatory standards, the Director shall make a tentative decision to approve your RAP application. The Director shall then prepare a draft RAP and provide an opportunity for public comment before making a final decision on your RAP application, according to Sections R315-270-79 through 230.

(b) If the Director tentatively finds that your RAP application does not include all of the information required by Section R315-270-110 or that your proposed remediation waste management activities do not meet the regulatory standards, the

Director may request additional information from you or ask you to correct deficiencies in your application. If you fail or refuse to provide any additional information the Director requests, or to correct any deficiencies in your RAP application, the Director may make a tentative decision to deny your RAP application. After making this tentative decision, the Director shall prepare a notice of intent to deny your RAP application and provide an opportunity for public comment before making a final decision on your RAP application, according to the requirements in Sections R315-270-79 through 230. The Director may deny the RAP application either in its entirety or in part.

R315-270-135. Hazardous Waste Permit Program -- What Shall the Director Include in a Draft Rap?

If the Director prepares a draft RAP, it shall include the:

(a) Information required under Subsections R315-270-110(a) through (f);

(b) The following terms and conditions:

(1) Terms and conditions necessary to ensure that the operating requirements specified in your RAP comply with applicable requirements of Rules R315-264, 266, and 268, including any recordkeeping and reporting requirements. In satisfying this provision, the Director may incorporate, expressly or by reference, applicable requirements of Rules R315-264, 266, and 268 into the RAP or establish site-specific conditions as required or allowed by Rules R315-264, 266, and 268;

(2) Terms and conditions in Section R315-270-30;

(3) Terms and conditions for modifying, revoking and reissuing, and terminating your RAP, as provided in Section R315-270-170; and

(4) Any additional terms or conditions that the Director determines are necessary to protect human health and the environment, including any terms and conditions necessary to respond to spills and leaks during use of any units permitted under the RAP; and

(c) If the draft RAP is part of another document, as described in Subsection R315-270-80(d)(2), the Director shall clearly identify the components of that document that constitute the draft RAP.

R315-270-140. Hazardous Waste Permit Program -- What Else Shall the Director Prepare in Addition to the Draft Rap or Notice of Intent to Deny?

Once the Director has prepared the draft RAP or notice of intent to deny, he shall then:

(a) Prepare a statement of basis that briefly describes the derivation of the conditions of the draft RAP and the reasons for them, or the rationale for the notice of intent to deny;

(b) Compile an administrative record, including:

(1) The RAP application, and any supporting data furnished by the applicant;

(2) The draft RAP or notice of intent to deny;

(3) The statement of basis and all documents cited therein, material readily available at the Division's office or published material that is generally available need not be physically included with the rest of the record, as long as it is specifically referred to in the statement of basis; and

(4) Any other documents that support the decision to approve or deny the RAP; and

(c) Make information contained in the administrative record available for review by the public upon request.

R315-270-145. Hazardous Waste Permit Program -- What Are the Procedures for Public Comment on the Draft Rap or Notice of Intent to Deny?

(a) The Director shall:

(1) Send notice to you of intent to approve or deny your

RAP application, and send you a copy of the statement of basis;

(2) Publish a notice of intent to approve or deny your RAP application in a major local newspaper of general circulation;

(3) Broadcast intent to approve or deny your RAP application over a local radio station; and

(4) Send a notice of intent to approve or deny your RAP application to each unit of local government having jurisdiction over the area in which your site is located, and to each State agency having any authority under State law with respect to any construction or operations at the site.

(b) The notice required by Subsection R315-270-145(a) shall provide an opportunity for the public to submit written comments on the draft RAP or notice of intent to deny within at least 45 days.

(c) The notice required by Subsection R315-270-145(a) shall include:

(1) The name and address of the office processing the RAP application;

(2) The name and address of the RAP applicant, and if different, the remediation waste management site or activity the RAP will regulate;

(3) A brief description of the activity the RAP will regulate;

(4) The name, address and telephone number of a person from whom interested persons may obtain further information, including copies of the draft RAP or notice of intent to deny, statement of basis, and the RAP application;

(5) A brief description of the comment procedures, and any other procedures by which the public may participate in the RAP decision;

(6) If a hearing is scheduled, the date, time, location and purpose of the hearing;

(7) If a hearing is not scheduled, a statement of procedures to request a hearing;

(8) The location of the administrative record, and times when it will be open for public inspection; and

(9) Any additional information the Director considers necessary or proper.

(d) If, within the comment period, the Director receives written notice of opposition to his intention to approve or deny your RAP application and a request for a hearing, the Director shall hold an informal public hearing to discuss issues relating to the approval or denial of your RAP application. The Director may also determine on his own initiative that an informal hearing is appropriate. The hearing shall include an opportunity for any person to present written or oral comments. Whenever possible, the Director shall schedule this hearing at a location convenient to the nearest population center to the remediation waste management site and give notice according to the requirements in Subsection R315-270-145(a). This notice shall, at a minimum, include the information required by Subsection R315-270-145(c) and:

(1) Reference to the date of any previous public notices relating to the RAP application;

(2) The date, time and place of the hearing; and

(3) A brief description of the nature and purpose of the hearing, including the applicable rules and procedures.

R315-270-150. Hazardous Waste Permit Program -- How Will the Director Make a Final Decision on My Rap Application?

(a) The Director shall consider and respond to any significant comments raised during the public comment period, or during any hearing on the draft RAP or notice of intent to deny, and revise your draft RAP based on those comments, as appropriate.

(b) If the Director determines that your RAP includes the information and terms and conditions required in Section R315-270-135, then he will issue a final decision approving your RAP

and, in writing, notify you and all commenters on your draft RAP that your RAP application has been approved.

(c) If the Director determines that your RAP does not include the information required in Section R315-270-135, then he will issue a final decision denying your RAP and, in writing, notify you and all commenters on your draft RAP that your RAP application has been denied.

(d) If the Director's final decision is that the tentative decision to deny the RAP application was incorrect, he will withdraw the notice of intent to deny and proceed to prepare a draft RAP, according to the requirements in Sections R315-270-79 through 230.

(e) When the Director issues a final RAP decision, the Director shall refer to the procedures for appealing the decision under Section R315-270-155.

(f) Before issuing the final RAP decision, the Director shall compile an administrative record. Material readily available at the Division office or published materials which are generally available and which are included in the administrative record need not be physically included with the rest of the record as long as it is specifically referred to in the statement of basis or the response to comments. The administrative record for the final RAP shall include information in the administrative record for the draft RAP, see Subsection R315-270-140(b), and:

(1) All comments received during the public comment period;

(2) Tapes or transcripts of any hearings;

(3) Any written materials submitted at these hearings;

(4) The responses to comments;

(5) Any new material placed in the record since the draft RAP was issued;

(6) Any other documents supporting the RAP; and

(7) A copy of the final RAP.

(g) The Director shall make information contained in the administrative record available for review by the public upon request.

R315-270-155. Hazardous Waste Permit Program -- May the Decision to Approve or Deny My Rap Application Be Administratively Appealed?

(a) Any commenter on the draft RAP or notice of intent to deny, or any participant in any public hearing(s) on the draft RAP, may appeal the Director's decision to approve or deny your RAP application under Section R315-124-19. Any person who did not file comments, or did not participate in any public hearing(s) on the draft RAP, may petition for administrative review only to the extent of the changes from the draft to the final RAP decision. Appeals of RAPs may be made to the same extent as for final permit decisions under Section R315-124-15 (or a decision under Section R315-270-29 to deny a permit for the active life of a hazardous waste management facility or unit).

(b) This appeal is a prerequisite to seeking judicial review of these actions.

R315-270-160. Hazardous Waste Permit Program -- When Does My Rap Become Effective?

Your RAP becomes effective 30 days after the Director notifies you and all commenters that your RAP is approved unless:

(a) The Director specifies a later effective date in his decision;

(b) You or another person has appealed your RAP under R315-270-155 (if your RAP is appealed, and the request for review is granted under Section R315-270-155, conditions of your RAP are stayed according to Section R315-124-16 of this chapter); or

(c) No commenters requested a change in the draft RAP, in which case the RAP becomes effective immediately when it is issued.

R315-270-165. Hazardous Waste Permit Program -- When May I Begin Physical Construction of New Units Permitted Under the Rap?

You shall not begin physical construction of new units permitted under the RAP for treating, storing or disposing of hazardous remediation waste before receiving a finally effective RAP.

R315-270-170. Hazardous Waste Permit Program -- After My Rap Is Issued, How May it Be Modified, Revoked and Reissued, or Terminated?

In your RAP, the Director shall specify, either directly or by reference, procedures for future modifications, revocations and reissuance, or terminations of your RAP. These procedures shall provide adequate opportunities for public review and comment on any modification, revocation and reissuance, or termination that would significantly change your management of your remediation waste, or that otherwise merits public review and comment. If your RAP has been incorporated into a traditional hazardous waste permit, as allowed under Subsection R315-270-85(c), then the RAP will be modified according to the applicable requirements in Sections R315-270-40 through 42, revoked and reissued according to the applicable requirements in Sections R315-270-41 and 43, or terminated according to the applicable requirements of Section R315-270-43.

R315-270-175. Hazardous Waste Permit Program -- for What Reasons May the Director Choose to Modify My Final Rap?

(a) The Director may modify your final RAP on his own initiative only if one or more of the following reasons listed in Section R315-27-175 exist(s). If one or more of these reasons do not exist, then the Director shall not modify your final RAP, except at your request. Reasons for modification are:

(1) You made material and substantial alterations or additions to the activity that justify applying different conditions;

(2) The Director finds new information that was not available at the time of RAP issuance and would have justified applying different RAP conditions at the time of issuance;

(3) The standards or regulations on which the RAP was based have changed because of new or amended statutes, rules, or by judicial decision after the RAP was issued;

(4) If your RAP includes any schedules of compliance, the Director may find reasons to modify your compliance schedule, such as an act of God, strike, flood, or materials shortage or other events over which you as the owner/operator have little or no control and for which there is no reasonably available remedy;

(5) You are not in compliance with conditions of your RAP;

(6) You failed in the application or during the RAP issuance process to disclose fully all relevant facts, or you misrepresented any relevant facts at the time;

(7) The Director has determined that the activity authorized by your RAP endangers human health or the environment and can only be remedied by modifying; or

(8) You have notified the Director, as required in the RAP under Subsection R315-270-30(1)(3)) of a proposed transfer of a RAP.

(b) Notwithstanding any other provision in Section R315-270-175, when the Director reviews a RAP for a land disposal facility under Section R315-270-195, he may modify the permit as necessary to assure that the facility continues to comply with the currently applicable requirements in Rules R315-124, 260 through 266 and 270.

(c) The Director shall not reevaluate the suitability of the facility location at the time of RAP modification unless new

information or standards indicate that a threat to human health or the environment exists that was unknown when the RAP was issued.

R315-270-180. Hazardous Waste Permit Program -- for What Reasons May the Director Choose to Revoke and Reissue My Final Rap?

(a) The Director may revoke and reissue your final RAP on his own initiative only if one or more reasons for revocation and reissuance exist(s). If one or more reasons do not exist, then the Director shall not modify or revoke and reissue your final RAP, except at your request. Reasons for modification or revocation and reissuance are the same as the reasons listed for RAP modifications in Subsections R315-270-175(a)(5) through (8) if the Director determines that revocation and reissuance of your RAP is appropriate.

(b) The Director shall not reevaluate the suitability of the facility location at the time of RAP revocation and reissuance, unless new information or standards indicate that a threat to human health or the environment exists that was unknown when the RAP was issued.

R315-270-185. Hazardous Waste Permit Program -- for What Reasons May the Director Choose to Terminate My Final Rap, or Deny My Renewal Application?

The Director may terminate your final RAP on his own initiative, or deny your renewal application for the same reasons as those listed for RAP modifications in Subsections R315-270-175(a)(5) through (7) if the Director determines that termination of your RAP or denial of your RAP renewal application is appropriate.

R315-270-190. Hazardous Waste Permit Program -- May the Decision to Approve or Deny a Modification, Revocation and Reissuance, or Termination of My Rap Be Administratively Appealed?

(a) Any commenter on the modification, revocation and reissuance or termination, or any person who participated in any hearing(s) on these actions, may appeal the Director's decision to approve a modification, revocation and reissuance, or termination of your RAP, according to Section R315-270-155. Any person who did not file comments or did not participate in any public hearing(s) on the modification, revocation and reissuance or termination, may petition for administrative review only of the changes from the draft to the final RAP decision.

(b) Any commenter on the modification, revocation and reissuance or termination, or any person who participated in any hearing(s) on these actions, may informally appeal the Director's decision to deny a request for modification, revocation and reissuance, or termination. Any person who did not file comments, or did not participate in any public hearing(s) on the modification, revocation and reissuance or termination may petition for administrative review only of the changes from the draft to the final RAP decision.

(c) The process for informal appeals of RAPs is found in Rule R305-7

R315-270-195. Hazardous Waste Permit Program -- When Will My RAP Expire?

RAPs shall be issued for a fixed term, not to exceed 10 years, although they may be renewed upon approval by the Director in fixed increments of no more than ten years. In addition, the Director shall review any RAP for hazardous waste land disposal five years after the date of issuance or reissuance and you or the Director shall follow the requirements for modifying your RAP as necessary to assure that you continue to comply with currently applicable requirements in Rules adopted under Section 19-6-101 through 125.

R315-270-200. Hazardous Waste Permit Program -- How May I Renew My RAP if it Is Expiring?

If you wish to renew your expiring RAP, you shall follow the process for application for and issuance of RAPs in Sections R315-270-79 through 230.

R315-270-205. Hazardous Waste Permit Program -- What Happens If I Have Applied Correctly for a Rap Renewal But Have Not Received Approval by the Time My Old Rap Expires?

If you have submitted a timely and complete application for a RAP renewal, but the Director, through no fault of yours, has not issued a new RAP with an effective date on or before the expiration date of your previous RAP, your previous RAP conditions continue in force until the effective date of your new RAP or RAP denial.

R315-270-210. Hazardous Waste Permit Program -- What Records Shall I Maintain Concerning My Rap?

You are required to keep records of:

(a) All data used to complete RAP applications and any supplemental information that you submit for a period of at least 3 years from the date the application is signed; and

(b) Any operating and/or other records the Director requires you to maintain as a condition of your RAP.

R315-270-215. Hazardous Waste Permit Program -- How Are Time Periods in the Requirements in Sections R315-27-79 through 230 and My Rap Computed?

(a) Any time period scheduled to begin on the occurrence of an act or event shall begin on the day after the act or event. For example, if your RAP specifies that you shall close a staging pile within 180 days after the operating term for that staging pile expires, and the operating term expires on June 1, then June 2 counts as day one of your 180 days, and you would have to complete closure by November 28.

(b) Any time period scheduled to begin before the occurrence of an act or event shall be computed so that the period ends on the day before the act or event. For example, if you are transferring ownership or operational control of your site, and wish to transfer your RAP, the new owner or operator shall submit a revised RAP application no later than 90 days before the scheduled change. Therefore, if you plan to change ownership on January 1, the new owner/operator shall submit the revised RAP application no later than October 3, so that the 90th day would be December 31.

(c) If the final day of any time period falls on a weekend or legal holiday, the time period shall be extended to the next working day. For example, if you wish to appeal the Director's decision to modify your RAP, then you shall file the appeal within 30 days after the Director has issued the final RAP decision. If the 30th day falls on Sunday, then you may submit your appeal by the Monday after. If the 30th day falls on July 4th, then you may submit your appeal by July 5th.

(d) Whenever a party or interested person has the right to or is required to act within a prescribed period after the service of notice or other paper upon him by mail, 3 days shall be added to the prescribed term. For example, if you wish to appeal the Director's decision to modify your RAP, then you shall file the appeal within 30 days after the Director has issued the final RAP decision. However, if the Director notifies you of his decision by mail, then you may have 33 days to file.

R315-270-220. Hazardous Waste Permit Program -- How May I Transfer My Rap to a New Owner or Operator?

(a) If you wish to transfer your RAP to a new owner or operator, you shall follow the requirements specified in your RAP for RAP modification to identify the new owner or operator, and incorporate any other necessary requirements.

These modifications do not constitute "significant" modifications for purposes of Section R315-270-170. The new owner/operator shall submit a revised RAP application no later than 90 days before the scheduled change along with a written agreement containing a specific date for transfer of RAP responsibility between you and the new permittees.

(b) When a transfer of ownership or operational control occurs, you as the old owner or operator shall comply with the applicable requirements in Section R315-264-140 through 151 until the new owner or operator has demonstrated that he is complying with the requirements in Section R315-264-140 through 151. The new owner or operator shall demonstrate compliance with Section R315-264-140 through 151 within six months of the date of the change in ownership or operational control of the facility or remediation waste management site. When the new owner/operator demonstrates compliance with Section R315-264-140 through 151 to the Director, the Director shall notify you that you no longer need to comply with Section R315-264-140 through 151 as of the date of demonstration.

R315-270-230. Hazardous Waste Permit Program -- May I Perform Remediation Waste Management Activities Under a Rap at a Location Removed From the Area Where the Remediation Wastes Originated?

(a) You may request a RAP for remediation waste management activities at a location removed from the area where the remediation wastes originated if you believe such a location would be more protective than the contaminated area or areas in close proximity.

(b) If the Director determines that an alternative location, removed from the area where the remediation waste originated, is more protective than managing remediation waste at the area of contamination or areas in close proximity, then the Director may approve a RAP for this alternative location.

(c) You shall request the RAP, and the Director shall approve or deny the RAP, according to the procedures and requirements in Sections R315-270-79 through 230.

(d) A RAP for an alternative location shall also meet the following requirements, which the Director shall include in the RAP for such locations:

(1) The RAP for the alternative location shall be issued to the person responsible for the cleanup from which the remediation wastes originated;

(2) The RAP is subject to the expanded public participation requirements in Sections R315-124-31, 32, and 33;

(3) The RAP is subject to the public notice requirements in Subsection R315-124-10(c);

(4) The site permitted in the RAP may not be located within 61 meters or 200 feet of a fault which has had displacement in the Holocene time, you shall demonstrate compliance with this standard through the requirements in Subsection R315-270-14(b)(11), See definitions of terms in Subsection R315-264-18(a);

(e) These alternative locations are remediation waste management sites, and retain the following benefits of remediation waste management sites:

(1) Exclusion from facility-wide corrective action under Section R315-264-101; and

(2) Application of Subsection R315-264-1(j) in lieu of Sections R315-264-10 through 56.

R315-270-235. Hazardous Waste Permit Program -- Integration with Maximum Achievable Control Technology (MACT) Standards -- Options For Incinerators, Cement Kilns, Lightweight Aggregate Kilns, Solid Fuel Boilers, Liquid Fuel Boilers and Hydrochloric Acid Production Furnaces to Minimize Emissions From Startup, Shutdown, and Malfunction Events.

(a) Facilities with existing permits

(1) Revisions to permit conditions after documenting compliance with MACT. The owner or operator of a hazardous waste-permitted incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace may request that the Director address permit conditions that minimize emissions from startup, shutdown, and malfunction events under any of the following options when requesting removal of permit conditions that are no longer applicable according to Subsections R315-264-340(b) and R315-266-100(b):

(i) Retain relevant permit conditions. Under this option, the Director shall:

(A) Retain permit conditions that address releases during startup, shutdown, and malfunction events, including releases from emergency safety vents, as these events are defined in the facility's startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2), which is incorporated by reference in Subsection R307-214-2(39); and

(B) Limit applicability of those permit conditions only to when the facility is operating under its startup, shutdown, and malfunction plan.

(ii) Revise relevant permit conditions.

(A) Under this option, the Director shall:

(I) Identify a subset of relevant existing permit requirements, or develop alternative permit requirements, that ensure emissions of toxic compounds are minimized from startup, shutdown, and malfunction events, including releases from emergency safety vents, based on review of information including the source's startup, shutdown, and malfunction plan, design, and operating history.

(II) Retain or add these permit requirements to the permit to apply only when the facility is operating under its startup, shutdown, and malfunction plan.

(B) Changes that may significantly increase emissions.

(I) You shall notify the Director in writing of changes to the startup, shutdown, and malfunction plan or changes to the design of the source that may significantly increase emissions of toxic compounds from startup, shutdown, or malfunction events, including releases from emergency safety vents. You shall notify the Director of such changes within five days of making such changes. You shall identify in the notification recommended revisions to permit conditions necessary as a result of the changes to ensure that emissions of toxic compounds are minimized during these events.

(II) The Director may revise permit conditions as a result of these changes to ensure that emissions of toxic compounds are minimized during startup, shutdown, or malfunction events, including releases from emergency safety vents either:

(Iii) Upon permit renewal, or, if warranted;

(Iiii) By modifying the permit under Subsection R315-270-41(a) or Section R315-270-42.

(iii) Remove permit conditions. Under this option:

(A) The owner or operator shall document that the startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2), which is incorporated by reference in Subsection R307-214-2(39), has been approved by the Director of the Division of Air Quality under 40 CFR 63.1206(c)(2)(ii)(B), which is incorporated by reference in Subsection R307-214-2(39); and

(B) The Director shall remove permit conditions that are no longer applicable according to Subsections R315-264-340(b) and R315-266-100(b).

(2) Addressing permit conditions upon permit reissuance. The owner or operator of an incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace that has conducted a comprehensive performance test and submitted to the Director of the Division of Air Quality a Notification of Compliance documenting compliance with the standards of Subsection

R315-214-2(39), which adopts 40 CFR 63 subpart EEE by reference, may request in the application to reissue the permit for the combustion unit that the Director control emissions from startup, shutdown, and malfunction events under any of the following options:

(i) RCRA option A.

(A) Under this option, the Director shall:

(I) Include, in the permit, conditions that ensure compliance with Subsections R315-264-345(a) and 345(c) or Subsections R315-266-102(e)(1) and 102(e)(2)(iii) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events, including releases from emergency safety vents; and

(II) Specify that these permit requirements apply only when the facility is operating under its startup, shutdown, and malfunction plan; or

(ii) RCRA option B.

(A) Under this option, the Director shall:

(I) Include, in the permit conditions, that ensure emissions of toxic compounds are minimized from startup, shutdown, and malfunction events, including releases from emergency safety vents, based on review of information including the source's startup, shutdown, and malfunction plan, design, and operating history; and

(II) Specify that these permit requirements apply only when the facility is operating under its startup, shutdown, and malfunction plan.

(B) Changes that may significantly increase emissions.

(I) You shall notify the Director in writing of changes to the startup, shutdown, and malfunction plan or changes to the design of the source that may significantly increase emissions of toxic compounds from startup, shutdown, or malfunction events, including releases from emergency safety vents. You shall notify the Director of such changes within five days of making such changes. You shall identify in the notification recommended revisions to permit conditions necessary as a result of the changes to ensure that emissions of toxic compounds are minimized during these events.

(II) The Director may revise permit conditions as a result of these changes to ensure that emissions of toxic compounds are minimized during startup, shutdown, or malfunction events, including releases from emergency safety vents either:

(Iii) Upon permit renewal, or, if warranted;

(Iiii) By modifying the permit under Subsection R315-270-41(a) or Section R315-270-42; or

(iii) CAA option. Under this option:

(A) The owner or operator shall document that the startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2), which is incorporated by reference in Subsection R307-214-2(39), has been approved by the Director of the Division of Air Quality under 40 CFR 63.1206(c)(2)(ii)(B), which is incorporated by reference in Subsection R307-214-2(39); and

(B) The Director shall omit from the permit conditions that are not applicable under Subsections R315-264-340(b) and R315-266-100(b).

(b) Interim status facilities

(1) Interim status operations. In compliance with Section R315-265-340 and Subsection R315-266-100(b), the owner or operator of an incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace that is operating under the interim status standards of Rule R315-265 or 266 may control emissions of toxic compounds during startup, shutdown, and malfunction events under either of the following options after conducting a comprehensive performance test and submitting to the Director of the Division of Air Quality a Notification of Compliance documenting compliance with the standards of Subsection R307-214-2(39), which adopts 40 CFR 63 subpart EEE by

reference.

(i) RCRA option. Under this option, the owner or operator continues to comply with the interim status emission standards and operating requirements of Rules R315-265 or 266 relevant to control of emissions from startup, shutdown, and malfunction events. Those standards and requirements apply only during startup, shutdown, and malfunction events; or

(ii) CAA option. Under this option, the owner or operator is exempt from the interim status standards of Rules R315-265 or 266 relevant to control of emissions of toxic compounds during startup, shutdown, and malfunction events upon submission of written notification and documentation to the Director that the startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2), which is incorporated by reference in Subsection R307-214-2(39), has been approved by the Director of the Division of Air Quality under 40 CFR 63.1206(c)(2)(ii)(B), which is incorporated by reference in Subsection R307-214-2(39).

(2) Operations under a subsequent RCRA permit. When an owner or operator of an incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace that is operating under the interim status standards of Rules R315-265 or 266 submits a RCRA permit application, the owner or operator may request that the Director control emissions from startup, shutdown, and malfunction events under any of the options provided by Subsection R315-270-235(a)(2)(i), (a)(2)(ii), or (a)(2)(iii).

(c) New units. Hazardous waste incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace units that become subject to hazardous waste permit requirements after October 12, 2005 shall control emissions of toxic compounds during startup, shutdown, and malfunction events under either of the following options:

(1) Comply with the requirements specified in 40 CFR 63.1206(c)(2), which is incorporated by reference in Subsection R307-214-2(39); or

(2) Request to include in the hazardous waste permit, conditions that ensure emissions of toxic compounds are minimized from startup, shutdown, and malfunction events, including releases from emergency safety vents, based on review of information including the source's startup, shutdown, and malfunction plan and design. The Director shall specify that these permit conditions apply only when the facility is operating under its startup, shutdown, and malfunction plan.

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R315. Environmental Quality, Waste Management and Radiation Control, Waste Management.**R315-273. Standards for Universal Waste Management.****R315-273-1. Standards for Universal Waste Management -- Scope.**

(a) Rule R315-273 establishes requirements for managing the following:

- (1) Batteries as described in Section R315-273-2;
- (2) Pesticides as described in Section R315-273-3;
- (3) Mercury-containing equipment as described in Section R315-273-4;
- (4) Lamps as described in Section R315-273-5;
- (5) Antifreeze as described in Subsection R315-273-6(a);

and

- (6) Aerosol cans as described in Subsection R315-273-6(b).

(b) Rule R315-273 provides an alternative set of management standards in lieu of regulation under Rules R315-260 through 266, 268, and 270. If a waste handler chooses to manage its universal waste under the Rule R315-273, but fails to meet requirements in this rule, the waste handler remains subject to, and shall comply with, all applicable requirements of Rules R315-260 through 266, 268, 270 and 124.

Note: Only wastes that are hazardous, i.e., are listed or exhibit one or more characteristics of hazardous waste, are subject to the Rule R315-273 universal waste regulations. Compliance with the reduced set of Rule R315-273 requirements is an option that waste handlers may choose for managing their universal wastes, batteries, pesticides, mercury-containing devices, aerosol cans, lamps, and antifreeze. If universal waste handlers wish, they may instead continue to manage these hazardous wastes under the full hazardous waste regulations for generators, transporters, and treatment, storage, and disposal facilities.

R315-273-2. Standards for Universal Waste Management -- Applicability-Batteries.

(a) Batteries covered under Section R315-273.

(1) The requirements of Rule R315-273 apply to persons managing batteries, as described in Section R315-273-9, except those listed in Section R315-273-2(b).

(2) Spent lead-acid batteries which are not managed under Section R315-266-80 are subject to management under Rule R315-273.

(b) Batteries not covered under Rule R315-273. The requirements of Rule R315-273 do not apply to persons managing the following batteries:

(1) Spent lead-acid batteries that are managed under Section R315-266-80.

(2) Batteries, as described in Section R315-273-9, that are not yet wastes under Rule R315-261, including those that do not meet the criteria for waste generation in Subsection R315-273-2(c).

(3) Batteries, as described in Section R315-273-9 that are not hazardous waste. A battery is a hazardous waste if it exhibits one or more of the characteristics identified in Sections R315-261-20 through 24.

(c) Generation of waste batteries.

(1) A used battery becomes a waste on the date it is discarded, e.g., when sent for reclamation.

(2) An unused battery becomes a waste on the date the handler decides to discard it.

R315-273-3. Standards for Universal Waste Management -- Applicability-Pesticides.

(a) Pesticides covered under Rule R315-273. The requirements of Rule R315-273 apply to persons managing pesticides, as described in Section R315-273-9, meeting the following conditions, except those listed in Subsection R315-

273-3(b):

(1) Recalled pesticides that are:

(i) Stocks of a suspended and canceled pesticide that are part of a voluntary or mandatory recall under FIFRA Section 19(b), including, but not limited to those owned by the registrant responsible for conducting the recall; or

(ii) Stocks of a suspended or cancelled pesticide, or a pesticide that is not in compliance with FIFRA, that are part of a voluntary recall by the registrant.

(2) Stocks of other unused pesticide products that are collected and managed as part of a waste pesticide collection program.

(b) Pesticides not covered under Rule R315-273. The requirements of Rule R315-273 do not apply to persons managing the following pesticides:

(1) Recalled pesticides described in Subsection R315-273-3(a)(1), and unused pesticide products described in Subsection R315-273-3(a)(2), that are managed by farmers in compliance with Section R315-262-70. Section R315-262-70 addresses pesticides disposed of on the farmer's own farm in a manner consistent with the disposal instructions on the pesticide label, providing the container is triple rinsed in accordance with Subsection R315-261-7(b)(3);

(2) Pesticides not meeting the conditions set forth in Subsection R315-273-3(a). These pesticides shall be managed in compliance with the hazardous waste regulations in Rules R315-260 through 266, 268, and 270;

(3) Pesticides that are not wastes under Rule R315-261, including those that do not meet the criteria for waste generation in Subsection R315-273-3(c) or those that are not wastes as described in Subsection R315-273-3(d); and

(4) Pesticides that are not hazardous waste. A pesticide is a hazardous waste if it is listed in Sections R315-261-30 through 35 or if it exhibits one or more of the characteristics identified in Sections R315-261-20 through 24.

(c) When a pesticide becomes a waste.

(1) A recalled pesticide described in Subsection R315-273-3(a)(1) becomes a waste on the first date on which both of the following conditions apply:

(i) The generator of the recalled pesticide agrees to participate in the recall; and

(ii) The person conducting the recall decides to discard, e.g., burn the pesticide for energy recovery.

(2) An unused pesticide product described in Subsection R315-273-3(a)(2) becomes a waste on the date the generator decides to discard it.

(d) Pesticides that are not wastes. The following pesticides are not wastes:

(1) Recalled pesticides described in Subsection R315-273-3(a)(1), provided that the person conducting the recall:

(i) Has not made a decision to discard, e.g., burn for energy recovery, the pesticide. Until such a decision is made, the pesticide does not meet the definition of "solid waste" under Section R315-261.2; thus the pesticide is not a hazardous waste and is not subject to hazardous waste requirements, including Rule R315-273. This pesticide remains subject to the requirements of FIFRA; or

(ii) Has made a decision to use a management option that, under Section R315-261-2, does not cause the pesticide to be a solid waste; i.e., the selected option is use, other than use constituting disposal, or reuse, other than burning for energy recovery, or reclamation. Such a pesticide is not a solid waste and therefore is not a hazardous waste, and is not subject to the hazardous waste requirements including Rule R315-273. This pesticide, including a recalled pesticide that is exported to a foreign destination for use or reuse, remains subject to the requirements of FIFRA.

(2) Unused pesticide products described in Subsection R315-273-3(a)(2), if the generator of the unused pesticide

product has not decided to discard, e.g., burn for energy recovery, them. These pesticides remain subject to the requirements of FIFRA.

R315-273-4. Standards for Universal Waste Management -- Applicability -- Mercury-Containing Equipment.

(a) Mercury-containing equipment covered under Rule R315-273. The requirements of Rule R315-273 apply to persons managing mercury-containing equipment, as described in Section R315-273-9, except those listed in Subsection R315-273-4(b).

(b) Mercury-containing equipment not covered under Rule R315-273. The requirements of Rule R315-273 do not apply to persons managing the following mercury-containing equipment:

(1) Mercury-containing equipment that is not yet a waste under Rule R315-261. Subsection R315-273-4(c) describes when mercury-containing equipment becomes a waste;

(2) Mercury-containing equipment that is not a hazardous waste. Mercury-containing equipment is a hazardous waste if it exhibits one or more of the characteristics identified in Sections R315-261-20 through 24 or is listed in Sections R315-261-30 through 35; and

(3) Equipment and devices from which the mercury-containing components have been removed.

(c) Generation of waste mercury-containing equipment.

(1) Used mercury-containing equipment becomes a waste on the date it is discarded.

(2) Unused mercury-containing equipment becomes a waste on the date the handler decides to discard it.

R315-273-5. Standards for Universal Waste Management -- Applicability-Lamps.

(a) Lamps covered under Rule R315-273. The requirements of Rule R315-273 apply to persons managing lamps as described in Section R315-273-9, except those listed in Subsection R315-273-5(b).

(b) Lamps not covered under Rule R315-273. The requirements of Rule R315-273 do not apply to persons managing the following lamps:

(1) Lamps that are not yet wastes under Rule R315-261 as provided in Subsection R315-273-5(c).

(2) Lamps that are not hazardous waste. A lamp is a hazardous waste if it exhibits one or more of the characteristics identified in Sections R315-261-20 through 24.

(c) Generation of waste lamps.

(1) A used lamp becomes a waste on the date it is discarded, e.g., sent for reclamation.

(2) An unused lamp becomes a waste on the date the handler decides to discard it.

R315-273-6. Standards for Universal Waste Management -- Applicability for Utah Specific Wastes.

(a) Antifreeze.

(1) The requirements of Rule R315-273 apply to persons managing antifreeze, as described in Section R315-273-9, except those listed in Subsection R315-273-6(a)(2).

(2) Antifreeze not covered under Rule R315-273. The requirements of Rule R315-273 do not apply to persons managing the following antifreeze:

(i) Antifreeze, as described in Section R315-273-9, that is not yet a waste under Rule R315-261, including antifreeze that does not meet the criteria for waste generation in Subsection R315-273-6(a)(4).

(ii) Antifreeze, as described in Section R315-273-9 that is not hazardous waste. Antifreeze is a hazardous waste if it exhibits one or more of the characteristics identified in Sections R315-261-20 through 24.

(4) Generation of waste antifreeze.

(i) Antifreeze becomes a waste on the date it is discarded,

e.g., when sent for reclamation.

(ii) Antifreeze becomes a waste on the date the handler decides to discard it.

(b) Aerosol Cans

(1) The requirements of Rule R315-273 apply to persons managing aerosol cans, as described in Section R315-273-9, except those listed in Subsection R315-273-6(b)(2).

(2) Aerosol cans not covered under Rule R315-273. The requirements of Rule R315-273 do not apply to persons managing the following aerosol cans:

(i) Aerosol cans, as described in Section R315-273-9, that are not yet wastes under Rule R315-261, including those that do not meet the criteria for waste generation in subsection R315-273(b)(3).

(ii) Aerosol cans, as described in Section R315-273-9, that are not hazardous waste. An aerosol can shall be managed as a hazardous waste if the can or its contents exhibit one or more of the characteristics identified in Sections R315-261-20 through 24, or if its contents are listed in Sections R315-261-30 through 35.

(3) Generation of waste aerosol cans.

(i) An aerosol can becomes a waste on the date it is discarded or is no longer useable. For purposes of Rule R315-273, an aerosol can is considered to be no longer useable when:

(A) the can is as empty as proper work practices allow;

(B) the spray mechanism no longer operates as designed;

(C) the propellant is spent; or

(D) the product is no longer used.

(ii) An unused aerosol can becomes a waste on the date the handler decides to discard it.

R315-273-8. Standards for Universal Waste Management -- Applicability -- Household and Conditionally Exempt Small Quantity Generator Waste.

(a) Persons managing the wastes listed below may, at their option, manage them under the requirements of Rule R315-273:

(1) Household wastes that are exempt under Subsection R315-261-4(b)(1) and are also of the same type as the universal wastes defined at Section R315-273-9; and/or

(2) Conditionally exempt small quantity generator wastes that are exempt under Section R315-261-5 and are also of the same type as the universal wastes defined at Section R315-273-9.

(b) Persons who commingle the wastes described in Subsections R315-273-8(a)(1) and (a)(2) together with universal waste regulated under Rule R315-273 shall manage the commingled waste under the requirements of Rule R315-273.

R315-273-9. Standards for Universal Waste Management -- Definitions.

(a) "Aerosol can" means a container with a total capacity of no more than 24 ounces of gas under pressure and is used to aerate and dispense any material through a valve in the form of a spray or foam.

(b) "Ampule" means an airtight vial made of glass, plastic, metal, or any combination of these materials.

(c) "Antifreeze" means an ethylene glycol based mixture that lowers the freezing point of water and is used as an engine coolant.

(d) "Battery" means a device consisting of one or more electrically connected electrochemical cells, which is designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus such connections, electrical and mechanical, as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed.

(e) "Destination facility" means a facility that treats,

disposes of, or recycles a particular category of universal waste, except those management activities described in Subsections R315-273-13(a) and (c) and Subsections R315-273-33(a) and (c). A facility, at which a particular category of universal waste is only accumulated, is not a destination facility for purposes of managing that category of universal waste.

(f) "Drum-top lamp crusher" means a device attached to a drum or container that mechanically reduces the size of lamps and includes a bag filter followed in series by a HEPA filter and an activated carbon filter. Drum-top crushers are the only devices that can be approved for the use of crushing lamps.

(g) "FIFRA" means the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136-136y).

(h) "Generator" means any person, by site, whose act or process produces hazardous waste identified or listed in Rule R315-261 or whose act first causes a hazardous waste to become subject to regulation.

(i) "Lamp," also referred to as "universal waste lamp" is defined as the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infra-red regions of the electromagnetic spectrum. Examples of common universal waste electric lamps include, but are not limited to, fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps.

(j) "Large Quantity Handler of Universal Waste" means a universal waste handler, as defined in Section R315-273-9 who accumulates 5,000 kilograms or more total of universal waste; batteries, pesticides, mercury-containing equipment, lamps, or any other universal waste regulated in Rule R315-273, calculated collectively; at any time. This designation as a large quantity handler of universal waste is retained through the end of the calendar year in which the 5,000 kilogram limit is met or exceeded.

(k) "Mercury-containing equipment" means a device or part of a device, including thermostats, but excluding batteries and lamps, that contains elemental mercury integral to its function.

(l) "On-site" means the same or geographically contiguous property which may be divided by public or private right-of-way, provided that the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along the right of way. Non-contiguous properties owned by the same person but connected by a right-of-way which he controls and to which the public does not have access, are also considered on-site property.

(m) "Pesticide" means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant, other than any article that:

(1) Is a new animal drug under FFDC A section 201(w), or

(2) Is an animal drug that has been determined by regulation of the Secretary of Health and Human Services not to be a new animal drug, or

(3) Is an animal feed under FFDC A section 201(x) that bears or contains any substances described by (1) or (2) above.

(n) "Small Quantity Handler of Universal Waste" means a universal waste handler, as defined in this Section R315-273-9 who does not accumulate 5,000 kilograms or more of universal waste at any time.

(o) "Thermostat" means a temperature control device that contains metallic mercury in an ampule attached to a bimetal sensing element, and mercury-containing ampules that have been removed from these temperature control devices in compliance with the requirements of Subsection R315-273-13(c)(2) or 33(c)(2).

(p) "Universal Waste" means any of the following hazardous wastes that are subject to the universal waste requirements of Rule R315-273:

(1) Batteries as described in Section R315-273-2;
 (2) Pesticides as described in Section R315-273-3;
 (3) Mercury-containing equipment as described in Section R315-273-4;

(4) Lamps as described in Section R315-273-5;
 (5) Antifreeze as described in Subsection R315-273-6(a); and

(6) Aerosol cans as described in Subsection R315-273-6(b).

(q) "Universal Waste Handler:"

(1) Means:

(i) A generator, as defined in Section R315-273-9, of universal waste; or

(ii) The owner or operator of a facility, including all contiguous property, that receives universal waste from other universal waste handlers, accumulates universal waste, and sends universal waste to another universal waste handler, to a destination facility, or to a foreign destination.

(2) Does not mean:

(i) A person who treats, except under the provisions of Subsection R315-273-13(a) or (c), or 33(a) or (c), disposes of, or recycles universal waste; or

(ii) A person engaged in the off-site transportation of universal waste by air, rail, highway, or water, including a universal waste transfer facility.

(r) "Universal Waste Transfer Facility" means any transportation-related facility including loading docks, parking areas, storage areas and other similar areas where shipments of universal waste are held during the normal course of transportation for ten days or less.

(s) "Universal Waste Transporter" means a person engaged in the off-site transportation of universal waste by air, rail, highway, or water.

R315-273-10. Standards for Universal Waste Management, Standards for Small Quantity Handlers of Universal Waste -- Applicability.

Sections R315-273-10 through 20 apply to small quantity handlers of universal waste, as defined in Section R315-273-9 except that the registration requirement of Subsection R315-273-13(d)(3) and Subsections R315-273-13(d)(6) and (7) do not apply to generators.

R315-273-11. Standards for Universal Waste Management, Standards for Small Quantity Handlers of Universal Waste -- Prohibitions.

A small quantity handler of universal waste is:

(a) Prohibited from disposing of universal waste; and
 (b) Prohibited from diluting or treating universal waste, except by responding to releases as provided in Section R315-273-17; or by managing specific wastes as provided in Section R315-273-13.

R315-273-12. Standards for Universal Waste Management, Standards for Small Quantity Handlers of Universal Waste -- Notification.

A small quantity handler of universal waste is not required to notify the Director of universal waste handling activities except as required under Subsection R315-273-13(3).

R315-273-13. Standards for Universal Waste Management, Standards for Small Quantity Handlers of Universal Waste -- Waste Management.

(a) Batteries. A small quantity handler of universal waste shall manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(1) A small quantity handler of universal waste shall contain any universal waste battery that shows evidence of

leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container shall be closed, structurally sound, compatible with the contents of the battery, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(2) A small quantity handler of universal waste may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed, except that cells may be opened to remove electrolyte but shall be immediately closed after removal:

- (i) Sorting batteries by type;
- (ii) Mixing battery types in one container;
- (iii) Discharging batteries so as to remove the electric charge;
- (iv) Regenerating used batteries;
- (v) Disassembling batteries or battery packs into individual batteries or cells;
- (vi) Removing batteries from consumer products; or
- (vii) Removing electrolyte from batteries.

(3) A small quantity handler of universal waste who removes electrolyte from batteries, or who generates other solid waste, e.g., battery pack materials, discarded consumer products, as a result of the activities listed above, shall determine whether the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste identified in Sections R315-261-20 through 24.

(i) If the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste, it is subject to all applicable requirements of Rules R315-260 through 266, 268 and 270. The handler is considered the generator of the hazardous electrolyte and/or other waste and is subject to Rule R315-262.

(ii) If the electrolyte or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

(b) Pesticides. A small quantity handler of universal waste shall manage universal waste pesticides in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides shall be contained in one or more of the following:

(1) A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; or

(2) A container that does not meet the requirements of Subsection R315-273-13(b)(1), provided that the unacceptable container is overpacked in a container that does meet the requirements of Subsection R315-273-13(b)(1); or

(3) A tank that meets the requirements of Sections R315-265-190 through 202, except for Subsection R315-265-197(c) and Sections R315-265-200 and 201; or

(4) A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(c) Mercury-containing equipment. A small quantity handler of universal waste shall manage universal waste mercury-containing equipment in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(1) A small quantity handler of universal waste shall place in a container any universal waste mercury-containing equipment with non-contained elemental mercury or that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. The container shall be closed, structurally sound, compatible with the contents of the device, shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable

conditions, and shall be reasonably designed to prevent the escape of mercury into the environment by volatilization or any other means.

(2) A small quantity handler of universal waste may remove mercury-containing ampules from universal waste mercury-containing equipment provided the handler:

(i) Removes and manages the ampules in a manner designed to prevent breakage of the ampules;

(ii) Removes the ampules only over or in a containment device, e.g., tray or pan sufficient to collect and contain any mercury released from an ampule in case of breakage;

(iii) Ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules from that containment device to a container that meets the requirements of Section R315-262-34;

(iv) Immediately transfers any mercury resulting from spills or leaks from broken ampules from the containment device to a container that meets the requirements of Section R315-262-34;

(v) Ensures that the area in which ampules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;

(vi) Ensures that employees removing ampules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;

(vii) Stores removed ampules in closed, non-leaking containers that are in good condition;

(viii) Packs removed ampules in the container with packing materials adequate to prevent breakage during storage, handling, and transportation;

(3) A small quantity handler of universal waste mercury-containing equipment that does not contain an ampule may remove the open original housing holding the mercury from universal waste mercury-containing equipment provided the handler:

(i) Immediately seals the original housing holding the mercury with an air-tight seal to prevent the release of any mercury to the environment; and

(ii) Follows all requirements for removing ampules and managing removed ampules under Subsection R315-273-13(c)(2); and

(4)(i) A small quantity handler of universal waste who removes mercury-containing ampules from mercury-containing equipment or seals mercury from mercury-containing equipment in its original housing shall determine whether the following exhibit a characteristic of hazardous waste identified in Sections R315-261-20 through 24:

(A) Mercury or clean-up residues resulting from spills or leaks; and/or

(B) Other solid waste generated as a result of the removal of mercury-containing ampules or housings, e.g., the remaining mercury-containing device.

(ii) If the mercury, residues, and/or other solid waste exhibits a characteristic of hazardous waste, it shall be managed in compliance with all applicable requirements of Rules R315-260 through 266, 268, and 270. The handler is considered the generator of the mercury, residues, and/or other waste and shall manage it in compliance with Rule R315-262.

(iii) If the mercury, residues, and/or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

(d) Lamps. A small quantity handler of universal waste shall manage lamps in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(1) A small quantity handler of universal waste shall

contain any lamp in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers and packages shall remain closed and shall lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

(2) A small quantity handler of universal waste shall immediately clean up and place in a container any lamp that is broken and shall place in a container any lamp that shows evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment. Containers shall be closed, structurally sound, compatible with the contents of the lamps and shall lack evidence of leakage, spillage or damage that could cause leakage or releases of mercury or other hazardous constituents to the environment under reasonably foreseeable conditions.

(3) A small quantity handler of universal waste may crush universal waste lamps using a drum-top lamp crusher designed specifically for crushing lamps provided that the small quantity handler submits a drum-top lamp crusher registration application to and receives approval from the Director. The registration application shall demonstrate that the small quantity handler shall operate the drum-top lamp crusher to ensure the following:

(i) The lamps are crushed in a closed accumulation container designed specifically for crushing lamps;

(ii) The lamps are crushed in a controlled manner that prevents the release of mercury vapor or other contaminants in exceedance of the manufacturer's specifications;

(iii) The drum-top lamp crusher shall consist of a bag filter followed in series by a HEPA filter and an activated carbon filter;

(iv) The drum-top lamp crusher is installed, maintained, and operated in accordance with written procedures developed by the manufacturer of the equipment including specific instructions for the frequency of filter changes;

(v) Filters are either characterized to demonstrate that they are not a hazardous waste or managed as a hazardous waste;

(vi) A spill clean-up kit is available;

(vii) The area in which the drum-top crusher is operated is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;

(viii) An employee using the drum-top lamp crusher is trained annually on the written operating, safety, personal protection and maintenance procedures of the system;

(ix) An employee using the drum-top lamp crusher is trained annually in emergency procedures;

(x) An operating record is kept and consists of the following:

(A) the number and size of lamps crushed per calendar day, per calendar month, and per calendar year;

(B) the schedule for the change out of filters;

(C) date and time of filter change out;

(D) date, type, and time of equipment maintenance;

(E) any occurrence of equipment malfunction; and

(F) procedures for preventing equipment malfunctions.

(4) The operating record shall be maintained for at least three years.

(5) When a drum-top crusher is no longer used or is relocated, the area where the crusher was located shall be decontaminated of all mercury and other contaminants caused by the use of the drum-top lamp crusher. A report documenting the decontamination steps as well as supporting analytical data demonstrating successful remediation shall be submitted to the Director for approval within 30 days following completion of decontamination.

(6) The small quantity handler shall provide a closure plan along with a detailed written estimate, in current dollars, of the cost of disposing of the drum-top lamp crusher; decontamination

of the area surrounding the drum-top lamp crusher, and any analytical costs required to show that decontamination is complete.

(7) The small quantity handler shall demonstrate financial assurance for the detailed cost estimates determined in Subsection R315-273-13(d)(6) using one of the options in Subsections R315-261-143(a) through (e).

(8) Crushed universal waste lamps may be managed as universal waste lamps under Rule R315-273 or they may be managed as hazardous waste in accordance with all applicable requirements of Rules R315-260 through 266 and 268.

(e) Antifreeze. A small quantity handler of universal waste shall manage universal waste antifreeze in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste antifreeze shall be contained in one or more of the following:

(1) A container that remains closed, structurally sound, compatible with the antifreeze, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; or

(2) A container that does not meet the requirements of Subsection R315-273-13(e)(1), provided that the unacceptable container is overpacked in a container that does meet the requirements of Subsection R315-273-13(e)(1); or

(3) A tank that meets the requirements of Sections R315-265-190 through 202, except for Subsection R315-265-197(c) and Sections R315-265-200 and 201; or

(4) A transport vehicle or vessel that is closed, structurally sound, compatible with the antifreeze, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(f) Aerosol cans. A small quantity handler of universal waste shall manage universal waste aerosol cans in a way that prevents release of any universal waste or component of a universal waste or accelerant to the environment as follows:

(1) A small quantity handler of universal waste shall immediately contain any universal waste aerosol can that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a separate individual container. The individual container shall be closed, structurally sound, compatible with the contents of the universal waste aerosol can, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(2) A small quantity handler of universal waste may accumulate universal waste aerosol cans in a specially designated accumulation container provided it is clearly marked for such use. The accumulation container shall be closed, structurally sound, compatible with the contents of the universal waste aerosol can, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. The universal waste aerosol cans shall be sorted by type and compatibility of contents to ensure that incompatible materials are segregated and managed appropriately in separate accumulation containers.

(3) A small quantity handler of universal waste may puncture universal waste aerosol cans to remove and collect the contents of the aerosol can provided the handler:

(i) Ensures that the universal waste aerosol can is punctured in a manner designed to prevent the release of any universal waste or component of universal waste or accelerant to the environment;

(ii) Ensures that the puncturing operations are performed safely by developing and implementing a written procedure detailing how to safely puncture universal waste aerosol cans. This procedure shall include:

(A) the type of equipment to be used to puncture the universal waste aerosol cans safely;

(B) operation and maintenance of the unit;

- (C) segregation of incompatible wastes;
 - (D) proper waste management practices, i.e., ensuring that flammable wastes are stored away from heat or open flames; and
 - (E) waste characterization;
 - (iii) Ensures that a spill clean-up kit is readily available to immediately clean up spills or leaks of the contents of the universal waste aerosol can which may occur during the can-puncturing operation;
 - (iv) Immediately transfers the contents of the universal waste aerosol can, or puncturing device if applicable, to a container that meets the requirements of Section R315-262-34;
 - (v) Ensures that the area in which the universal waste aerosol cans are punctured is well ventilated; and
 - (vi) Ensures that employees are thoroughly familiar with the procedure for sorting and puncturing universal waste aerosol cans, and proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies.
- (4)(i) A small quantity handler of universal waste who punctures universal waste aerosol cans to remove the contents of the aerosol can, or who generates other solid waste as a result of the activities listed above, shall determine whether the contents of the universal waste aerosol can, residues and/or other solid wastes exhibit a characteristic of hazardous waste identified in Sections R315-261-20 through 24, or are listed as a hazardous waste identified in Sections R315-261-30 through 35.
- (ii) If the contents of the universal waste aerosol can, residues and/or other solid waste exhibit a characteristic of hazardous waste or are listed hazardous wastes, they shall be managed in compliance with all applicable requirements of Rules R315-260 through 266, 268, 270 and 124. The handler is considered the generator of the contents of the universal waste aerosol can, residues, and/or other waste and is subject to the requirements of Rule R315-262. In addition to the Rule R315-262 labeling requirements, the container used to accumulate, store, or transport the hazardous waste contents removed from the punctured universal waste aerosol can shall be labeled with all applicable EPA Hazardous Waste Codes found in Sections R315-261-20 through 24 and Sections R315-261-30 through 35.
 - (iii) If the contents of the universal waste aerosol can, residues, and/or other solid waste are not hazardous, the handler may manage the waste in a way that is in compliance with applicable federal, state or local solid waste regulations.

R315-273-14. Standards for Universal Waste Management, Standards for Small Quantity Handlers of Universal Waste -- Labeling/Marking.

A small quantity handler of universal waste shall label or mark the universal waste to identify the type of universal waste as specified below:

- (a) Universal waste batteries, i.e., each battery, or a container in which the batteries are contained, shall be labeled or marked clearly with any one of the following phrases: "Universal Waste-Battery(ies)," or "Waste Battery(ies)," or "Used Battery(ies);"
- (b) A container, or multiple container package unit, tank, transport vehicle or vessel in which recalled universal waste pesticides as described in Subsection R315-273-3(a)(1) are contained shall be labeled or marked clearly with:
 - (1) The label that was on or accompanied the product as sold or distributed; and
 - (2) The words "Universal Waste-Pesticide(s)" or "Waste-Pesticide(s);"
- (c) A container, tank, or transport vehicle or vessel in which unused pesticide products as described in Subsection R315-273-3(a)(2) are contained shall be labeled or marked clearly with:
 - (1)(i) The label that was on the product when purchased,

if still legible;

- (ii) If using the labels described in Subsection R315-273-14(c)(1)(i) is not feasible, the appropriate label as required under the Department of Transportation regulation 49 CFR part 172;
 - (iii) If using the labels described in Subsections R315-273-14(c)(1)(i) and (ii) is not feasible, another label prescribed or designated by the waste pesticide collection program administered or recognized by a state; and
- (2) The words "Universal Waste-Pesticide(s)" or "Waste-Pesticide(s)."
- (d)(1) Universal waste mercury-containing equipment, i.e., each device, or a container in which the equipment is contained, shall be labeled or marked clearly with any of the following phrases: "Universal Waste-Mercury Containing Equipment," "Waste Mercury-Containing Equipment," or "Used Mercury-Containing Equipment."
 - (2) A universal waste mercury-containing thermostat or container containing only universal waste mercury-containing thermostats may be labeled or marked clearly with any of the following phrases: "Universal Waste-Mercury Thermostat(s)," "Waste Mercury Thermostat(s)," or "Used Mercury Thermostat(s)."
 - (e) Each lamp or a container or package in which such lamps are contained shall be labeled or marked clearly with one of the following phrases: "Universal Waste-Lamp(s)," or "Waste Lamp(s)," or "Used Lamp(s)".
 - (f) A container, tank, or transport vehicle or vessel in which antifreeze is contained shall be labeled or marked clearly with the words "Universal Waste- antifreeze" or "Waste-antifreeze."
 - (g) Universal waste aerosol cans, i.e., each can, or a container in which the universal waste aerosol cans are contained or accumulated, shall be labeled or marked clearly with any one of the following phrases: "Universal Waste-Aerosol Can(s)", or "Waste Aerosol Can(s)".

R315-273-15. Standards for Universal Waste Management, Standards for Small Quantity Handlers of Universal Waste -- Accumulation Time Limits.

- (a) A small quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler, unless the requirements of Subsection R315-273-15(b) are met.
- (b) A small quantity handler of universal waste may accumulate universal waste for longer than one year from the date the universal waste is generated, or received from another handler, if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal. However, the handler bears the burden of proving that such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal.
- (c) A small quantity handler of universal waste who accumulates universal waste shall be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received. The handler may make this demonstration by:
 - (1) Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;
 - (2) Marking or labeling each individual item of universal waste with the date it became a waste or was received;
 - (3) Maintaining an inventory system on-site that identifies the date each universal waste became a waste or was received;
 - (4) Maintaining an inventory system on-site that identifies the earliest date that any universal waste in a group of universal

waste items or a group of containers of universal waste became a waste or was received;

(5) Placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received; or

(6) Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

R315-273-16. Standards for Universal Waste Management, Standards for Small Quantity Handlers of Universal Waste -- Employee Training.

A small quantity handler of universal waste shall inform all employees who handle or have responsibility for managing universal waste. The information shall describe proper handling and emergency procedures appropriate to the type(s) of universal waste handled at the facility.

R315-273-17. Standards for Universal Waste Management, Standards for Small Quantity Handlers of Universal Waste -- Response to Releases.

(a) A small quantity handler of universal waste shall immediately contain all releases of universal wastes and other residues from universal wastes.

(b) A small quantity handler of universal waste shall determine whether any material resulting from the release is hazardous waste, and if so, shall manage the hazardous waste in compliance with all applicable requirements of Rules R315-260 through 266, 268 and 270. The handler is considered the generator of the material resulting from the release, and shall manage it in compliance with Rule R315-262.

R315-273-18. Standards for Universal Waste Management, Standards for Small Quantity Handlers of Universal Waste -- Off-Site Shipments.

(a) A small quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination.

(b) If a small quantity handler of universal waste self-transport universal waste off-site, the handler becomes a universal waste transporter for those self-transportation activities and shall comply with the transporter requirements of Sections R315-273-50 through 56 while transporting the universal waste.

(c) If a universal waste being offered for off-site transportation meets the definition of hazardous materials under 49 CFR parts 171 through 180, a small quantity handler of universal waste shall package, label, mark and placard the shipment, and prepare the proper shipping papers in accordance with the applicable Department of Transportation regulations under 49 CFR parts 172 through 180;

(d) Prior to sending a shipment of universal waste to another universal waste handler, the originating handler shall ensure that the receiving handler agrees to receive the shipment.

(e) If a small quantity handler of universal waste sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler shall either:

(1) Receive the waste back when notified that the shipment has been rejected, or

(2) Agree with the receiving handler on a destination facility to which the shipment will be sent.

(f) A small quantity handler of universal waste may reject a shipment containing universal waste, or a portion of a shipment containing universal waste that he has received from another handler. If a handler rejects a shipment or a portion of a shipment, he shall contact the originating handler to notify him

of the rejection and to discuss reshipment of the load. The handler shall:

(1) Send the shipment back to the originating handler, or

(2) If agreed to by both the originating and receiving handler, send the shipment to a destination facility.

(g) If a small quantity handler of universal waste receives a shipment containing hazardous waste that is not a universal waste, the handler shall immediately notify the Director of the illegal shipment, and provide the name, address, and phone number of the originating shipper. The Director shall provide instructions for managing the hazardous waste.

(h) If a small quantity handler of universal waste receives a shipment of non-hazardous, non-universal waste, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

R315-273-19. Standards for Universal Waste Management, Standards for Small Quantity Handlers of Universal Waste -- Tracking Universal Waste Shipments.

A small quantity handler of universal waste is not required to keep records of shipments of universal waste.

R315-273-20. Standards for Universal Waste Management, Standards for Small Quantity Handlers of Universal Waste -- Exports.

A small quantity handler of universal waste who sends universal waste to a foreign destination other than to those OECD countries specified in Subsection R315-262-58(a)(1), in which case the handler is subject to the requirements of Sections R315-262-80 through 89, shall:

(a) Comply with the requirements applicable to a primary exporter in Section R315-262-53, Subsections R315-262-56(a)(1) through (4), (6), and (b) and Section R315-262-57;

(b) Export such universal waste only upon consent of the receiving country and in conformance with the EPA Acknowledgement of Consent as defined in Sections R315-262-50 through 58; and

(c) Provide a copy of the EPA Acknowledgment of Consent for the shipment to the transporter transporting the shipment for export.

R315-273-30. Standards for Universal Waste Management, Standards for Large Quantity Handlers of Universal Waste -- Applicability.

Sections R315-273-30 through 40 apply to large quantity handlers of universal waste, as defined in Section R315-273-9 except that the registration requirement of Subsection R315-273-33(d)(3) and Subsections R315-273-33(d)(6) and (7) do not apply to generators.

R315-273-31. Standards for Universal Waste Management, Standards for Large Quantity Handlers of Universal Waste -- Prohibitions.

A large quantity handler of universal waste is:

(a) Prohibited from disposing of universal waste; and

(b) Prohibited from diluting or treating universal waste, except by responding to releases as provided in Section R315-273-37; or by managing specific wastes as provided in Section R315-273-33.

R315-273-32. Standards for Universal Waste Management, Standards for Large Quantity Handlers of Universal Waste -- Notification.

(a)(1) Except as provided in Subsections R315-273-32(a)(2) and (3), a large quantity handler of universal waste shall have sent written notification of universal waste management to the Director, and received an EPA Identification Number, before meeting or exceeding the 5,000 kilogram storage limit.

(2) A large quantity handler of universal waste who has already notified the Director of his hazardous waste management activities and has received an EPA Identification Number is not required to renotify under this section except as required in Subsection R315-273-33(d)(3).

(3) A large quantity handler of universal waste who manages recalled universal waste pesticides as described in Subsection R315-273-3(a)(1) and who has sent notification to EPA as required by 40 CFR part 165 is not required to notify for those recalled universal waste pesticides under this section.

(b) This notification shall include:

(1) The universal waste handler's name and mailing address;

(2) The name and business telephone number of the person at the universal waste handler's site who should be contacted regarding universal waste management activities;

(3) The address or physical location of the universal waste management activities;

(4) A list of all the types of universal waste managed by the handler; and

(5) A statement indicating that the handler is accumulating more than 5,000 kilograms of universal waste at one time.

R315-273-33. Standards For Universal Waste Management, Standards for Large Quantity Handlers of Universal Waste -- Waste Management.

(a) Batteries. A large quantity handler of universal waste shall manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(1) A large quantity handler of universal waste shall contain any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container shall be closed, structurally sound, compatible with the contents of the battery, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(2) A large quantity handler of universal waste may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed, except that cells may be opened to remove electrolyte but shall be immediately closed after removal:

(i) Sorting batteries by type;

(ii) Mixing battery types in one container;

(iii) Discharging batteries so as to remove the electric charge;

(iv) Regenerating used batteries;

(v) Disassembling batteries or battery packs into individual batteries or cells;

(vi) Removing batteries from consumer products; or

(vii) Removing electrolyte from batteries.

(3) A large quantity handler of universal waste who removes electrolyte from batteries, or who generates other solid waste, e.g., battery pack materials, discarded consumer products, as a result of the activities listed above, shall determine whether the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste identified in Sections R315-261-20 through 24.

(i) If the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste, it shall be managed in compliance with all applicable requirements of Rules R315-260 through 266, 268 and 270. The handler is considered the generator of the hazardous electrolyte and/or other waste and is subject to Rule R315-262.

(ii) If the electrolyte or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

(b) Pesticides. A large quantity handler of universal waste shall manage universal waste pesticides in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides shall be contained in one or more of the following:

(1) A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; or

(2) A container that does not meet the requirements of Subsection R315-273-33(b)(1), provided that the unacceptable container is overpacked in a container that does meet the requirements of Subsection R315-273-33(b)(1); or

(3) A tank that meets the requirements of Sections R315-265-190 through 202, except for Subsection R315-265-197(c) and Sections R315-265-200, and 201; or

(4) A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(c) Mercury-containing equipment. A large quantity handler of universal waste shall manage universal waste mercury-containing equipment in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(1) A large quantity handler of universal waste shall place in a container any universal waste mercury-containing equipment with non-contained elemental mercury or that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. The container shall be closed, structurally sound, compatible with the contents of the device, shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions, and shall be reasonably designed to prevent the escape of mercury into the environment by volatilization or any other means.

(2) A large quantity handler of universal waste may remove mercury-containing ampules from universal waste mercury-containing equipment provided the handler:

(i) Removes and manages the ampules in a manner designed to prevent breakage of the ampules;

(ii) Removes the ampules only over or in a containment device, e.g., tray or pan sufficient to collect and contain any mercury released from an ampule in case of breakage;

(iii) Ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks of broken ampules from that containment device to a container that meets the requirements of Section R315-262-34;

(iv) Immediately transfers any mercury resulting from spills or leaks from broken ampules from the containment device to a container that meets the requirements of Section R315-262-34;

(v) Ensures that the area in which ampules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;

(vi) Ensures that employees removing ampules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;

(vii) Stores removed ampules in closed, non-leaking containers that are in good condition;

(viii) Packs removed ampules in the container with packing materials adequate to prevent breakage during storage, handling, and transportation;

(3) A large quantity handler of universal waste mercury-containing equipment that does not contain an ampule may remove the open original housing holding the mercury from universal waste mercury-containing equipment provided the

handler:

(i) Immediately seals the original housing holding the mercury with an air-tight seal to prevent the release of any mercury to the environment; and

(ii) Follows all requirements for removing ampules and managing removed ampules under Subsection R315-273-33(c)(2); and

(4) (i) A large quantity handler of universal waste who removes mercury-containing ampules from mercury-containing equipment or seals mercury from mercury-containing equipment in its original housing shall determine whether the following exhibit a characteristic of hazardous waste identified in Sections R315-261-20 through 24:

(A) Mercury or clean-up residues resulting from spills or leaks and/or

(B) Other solid waste generated as a result of the removal of mercury-containing ampules or housings, e.g., the remaining mercury-containing device.

(ii) If the mercury, residues, and/or other solid waste exhibits a characteristic of hazardous waste, it shall be managed in compliance with all applicable requirements of Rules R315-260 through 266, 268 and 270. The handler is considered the generator of the mercury, residues, and/or other waste and shall manage it in compliance with Rule R315-262.

(iii) If the mercury, residues, and/or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

(d) Lamps. A large quantity handler of universal waste shall manage lamps in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(1) A large quantity handler of universal waste shall contain any lamp in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers and packages shall remain closed and shall lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

(2) A large quantity handler of universal waste shall immediately clean up and place in a container any lamp that is broken and shall place in a container any lamp that shows evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment. Containers shall be closed, structurally sound, compatible with the contents of the lamps and shall lack evidence of leakage, spillage or damage that could cause leakage or releases of mercury or other hazardous constituents to the environment under reasonably foreseeable conditions.

(3) A large quantity handler of universal waste may crush universal waste lamps using a drum-top lamp crusher designed specifically for crushing lamps provided that the Large quantity handler submits a drum-top lamp crusher registration application to and receives approval from the Director. The registration application shall demonstrate that the large quantity handler shall operate the drum-top lamp crusher to ensure the following:

(i) The lamps are crushed in a closed accumulation container designed specifically for crushing lamps;

(ii) The lamps are crushed in a controlled manner that prevents the release of mercury vapor or other contaminants in exceedance of the manufacturer's specifications;

(iii) The drum-top lamp crusher shall consist of a bag filter followed in series by a HEPA filter and an activated carbon filter;

(iv) The drum-top lamp crusher is installed, maintained, and operated in accordance with written procedures developed by the manufacturer of the equipment including specific instructions for the frequency of filter changes;

(v) Filters are either characterized to demonstrate that they are not a hazardous waste or managed as a hazardous waste;

(vi) A spill clean-up kit is available;

(vii) The area in which the drum-top crusher is operated is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;

(viii) The employee using the drum-top lamp crusher is trained annually on the written operating, safety, personal protection and maintenance procedures of the system;

(ix) The employee using the drum-top lamp crusher is trained annually in emergency procedures;

(x) An operating record is kept and consists of the following:

(A) the number and size of lamps crushed per calendar day, per calendar month, and per calendar year;

(B) the schedule for the change out of filters;

(C) date and time of filter change out;

(D) date, type, and time of equipment maintenance;

(E) any occurrence of equipment malfunction; and

(F) procedures for preventing equipment malfunctions.

(4) The operating record shall be maintained for at least three years.

(5) When a drum-top crusher is no longer used or is relocated, the area where the crusher was located shall be decontaminated of all mercury and other contaminants caused by the use of the drum-top lamp crusher. A report documenting the decontamination steps as well as supporting analytical data demonstrating successful remediation shall be submitted to the Director for approval within 30 days following completion of decontamination.

(6) The large quantity handler shall provide a closure plan along with a detailed written estimate, in current dollars, of the cost of disposing the drum-top lamp crusher; decontamination of the area surrounding the drum-top lamp crusher, and any analytical costs required to show that decontamination is complete.

(7) The large quantity handler shall demonstrate financial assurance for the detailed cost estimates determined in Subsection R315-273-33(d)(6) using one of the options in Subsections R315-261-143(a) through (e).

(8) Crushed universal waste lamps may be managed as universal waste lamps under Rule R315-273 or they may be managed as hazardous waste in accordance with all applicable requirements of Rules R315-260 through 266 and 268.

(e) Antifreeze. A large quantity handler of universal waste shall manage universal waste antifreeze in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste antifreeze shall be contained in one or more of the following:

(1) A container that remains closed, structurally sound, compatible with the antifreeze, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; or

(2) A container that does not meet the requirements of Subsection R315-273-13(e)(1), provided that the unacceptable container is overpacked in a container that does meet the requirements of Subsection R315-273-13(e)(1); or

(3) A tank that meets the requirements of Sections R315-265-190 through 202, except for Subsection R315-265-197(c) and Sections R315-265-200 and 201; or

(4) A transport vehicle or vessel that is closed, structurally sound, compatible with the antifreeze, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(f) Aerosol cans. A large quantity handler of universal waste shall manage universal waste aerosol cans in a way that prevents release of any universal waste or component of a universal waste or accelerant to the environment as follows:

(1) A large quantity handler of universal waste shall

immediately contain any universal waste aerosol can that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a separate individual container. The individual container shall be closed, structurally sound, compatible with the contents of the universal waste aerosol can, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(2) A large quantity handler of universal waste may accumulate universal waste aerosol cans in a specially designated accumulation container provided it is clearly marked for such use. The accumulation container shall be closed, structurally sound, compatible with the contents of the universal waste aerosol can, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. The universal waste aerosol cans shall be sorted by type and compatibility of contents to ensure that incompatible materials are segregated and managed appropriately in separate accumulation containers.

(3) A large quantity handler of universal waste may puncture universal waste aerosol cans to remove and collect the contents of the aerosol can provided the handler:

(i) Ensures that the universal waste aerosol can is punctured in a manner designed to prevent the release of any universal waste or component of universal waste or accelerant to the environment;

(ii) Ensures that the puncturing operations are performed safely by developing and implementing a written procedure detailing how to safely puncture universal waste aerosol cans. This procedure shall include:

(A) the type of equipment to be used to puncture the universal waste aerosol cans safely;

(B) operation and maintenance of the unit;

(C) segregation of incompatible wastes;

(D) proper waste management practices, i.e., ensuring that flammable wastes are stored away from heat or open flames; and

(E) waste characterization;

(iii) Ensures that a spill clean-up kit is readily available to immediately clean up spills or leaks of the contents of the universal waste aerosol can which may occur during the can-puncturing operation;

(iv) Immediately transfers the contents of the universal waste aerosol can, or puncturing device if applicable, to a container that meets the requirements of Section R315-262-34;

(v) Ensures that the area in which the universal waste aerosol cans are punctured is well ventilated; and

(vi) Ensures that employees are thoroughly familiar with the procedure for sorting and puncturing universal waste aerosol cans, and proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies.

(4)(i) A large quantity handler of universal waste who punctures universal waste aerosol cans to remove the contents of the aerosol can, or who generates other solid waste as a result of the activities listed above, shall determine whether the contents of the universal waste aerosol can, residues and/or other solid wastes exhibit a characteristic of hazardous waste identified in Sections R315-261-20 through 24, or are listed as a hazardous waste identified in Sections R315-261-30 through 35.

(ii) If the contents of the universal waste aerosol can, residues and/or other solid waste exhibit a characteristic of hazardous waste or are listed hazardous wastes, they shall be managed in compliance with all applicable requirements of Rules R315-260 through 266, 268, 270 and 124. The handler is considered the generator of the contents of the universal waste aerosol can, residues, and/or other waste and is subject to the requirements of Rule R315-262. In addition to the Rule R315-262 labeling requirements, the container used to accumulate,

store, or transport the hazardous waste contents removed from the punctured universal waste aerosol can shall be labeled with all applicable EPA Hazardous Waste Codes found in Sections R315-261-20 through 24 and Sections R315-261-30 through 35.

(iii) If the contents of the universal waste aerosol can, residues, and/or other solid waste are not hazardous, the handler may manage the waste in a way that is in compliance with applicable federal, state or local solid waste regulations.

R315-273-34. Standards for Universal Waste Management, Standards for Large Quantity Handlers of Universal Waste -- Labeling/Marking.

A large quantity handler of universal waste shall label or mark the universal waste to identify the type of universal waste as specified below:

(a) Universal waste batteries, i.e., each battery, or a container or tank in which the batteries are contained, shall be labeled or marked clearly with any one of the following phrases: "Universal Waste-Battery(ies)," or "Waste Battery(ies)," or "Used Battery(ies);"

(b) A container, or multiple container package unit, tank, transport vehicle or vessel in which recalled universal waste pesticides as described in Subsection R315-273-3(a)(1) are contained shall be labeled or marked clearly with:

(1) The label that was on or accompanied the product as sold or distributed; and

(2) The words "Universal Waste-Pesticide(s)" or "Waste-Pesticide(s);"

(c) A container, tank, or transport vehicle or vessel in which unused pesticide products as described in Subsection R315-273-3(a)(2) are contained shall be labeled or marked clearly with:

(1)(i) The label that was on the product when purchased, if still legible;

(ii) If using the labels described in Subsection R315-273-34(c)(1)(i) is not feasible, the appropriate label as required under the Department of Transportation regulation 49 CFR part 172;

(iii) If using the labels described in Subsections R315-273-34(c)(1)(i) and (1)(ii) is not feasible, another label prescribed or designated by the pesticide collection program; and

(2) The words "Universal Waste-Pesticide(s)" or "Waste-Pesticide(s)."

(d)(1) Mercury-containing equipment, i.e., each device, or a container in which the equipment is contained, shall be labeled or marked clearly with any of the following phrases: "Universal Waste-Mercury Containing Equipment," "Waste Mercury-Containing Equipment," or "Used Mercury-Containing Equipment."

(2) A universal waste mercury-containing thermostat or container containing only universal waste mercury-containing thermostats may be labeled or marked clearly with any of the following phrases: "Universal Waste-Mercury Thermostat(s)," "Waste Mercury Thermostat(s)," or "Used Mercury Thermostat(s)."

(e) Each lamp or a container or package in which such lamps are contained shall be labeled or marked clearly with any one of the following phrases: "Universal Waste-Lamp(s)," or "Waste Lamp(s)," or "Used Lamp(s)."

(f) A container, tank, or transport vehicle or vessel in which antifreeze is contained shall be labeled or marked clearly with the words "Universal Waste- antifreeze" or "Waste-antifreeze."

(g) Universal waste aerosol cans, i.e., each can, or a container in which the universal waste aerosol cans are contained or accumulated, shall be labeled or marked clearly with any one of the following phrases: "Universal Waste-

Aerosol Can(s)", or "Waste Aerosol Can(s)".

R315-273-35. Standards for Universal Waste Management, Standards for Large Quantity Handlers of Universal Waste -- Accumulation Time Limits.

(a) A large quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler, unless the requirements of Subsection R315-273-35(b) are met.

(b) A large quantity handler of universal waste may accumulate universal waste for longer than one year from the date the universal waste is generated, or received from another handler, if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal. However, the handler bears the burden of proving that such activity was solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal.

(c) A large quantity handler of universal waste shall be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received. The handler may make this demonstration by:

(1) Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;

(2) Marking or labeling the individual item of universal waste, e.g., each battery or thermostat, with the date it became a waste or was received;

(3) Maintaining an inventory system on-site that identifies the date the universal waste being accumulated became a waste or was received;

(4) Maintaining an inventory system on-site that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received;

(5) Placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received; or

(6) Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

R315-273-36. Standards for Universal Waste Management, Standards for Large Quantity Handlers of Universal Waste -- Employee Training.

A large quantity handler of universal waste shall ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relative to their responsibilities during normal facility operations and emergencies.

R315-273-37. Standards for Universal Waste Management, Standards for Large Quantity Handlers of Universal Waste -- Response To Releases.

(a) A large quantity handler of universal waste shall immediately contain all releases of universal wastes and other residues from universal wastes.

(b) A large quantity handler of universal waste shall determine whether any material resulting from the release is hazardous waste, and if so, shall manage the hazardous waste in compliance with all applicable requirements of Rules R315-260 through 266, 268 and 270. The handler is considered the generator of the material resulting from the release, and is subject to Rule R315-262.

R315-273-38. Standards for Universal Waste Management, Standards for Large Quantity Handlers of Universal Waste

-- Off-Site Shipments.

(a) A large quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination.

(b) If a large quantity handler of universal waste self-transport universal waste off-site, the handler becomes a universal waste transporter for those self-transportation activities and shall comply with the transporter requirements of Sections R315-273-50 through 56 while transporting the universal waste.

(c) If a universal waste being offered for off-site transportation meets the definition of hazardous materials under 49 CFR 171 through 180, a large quantity handler of universal waste shall package, label, mark and placard the shipment, and prepare the proper shipping papers in accordance with the applicable Department of Transportation regulations under 49 CFR parts 172 through 180;

(d) Prior to sending a shipment of universal waste to another universal waste handler, the originating handler shall ensure that the receiving handler agrees to receive the shipment.

(e) If a large quantity handler of universal waste sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler shall either:

(1) Receive the waste back when notified that the shipment has been rejected, or

(2) Agree with the receiving handler on a destination facility to which the shipment will be sent.

(f) A large quantity handler of universal waste may reject a shipment containing universal waste, or a portion of a shipment containing universal waste that he has received from another handler. If a handler rejects a shipment or a portion of a shipment, he shall contact the originating handler to notify him of the rejection and to discuss reshipment of the load. The handler shall:

(1) Send the shipment back to the originating handler, or

(2) If agreed to by both the originating and receiving handler, send the shipment to a destination facility.

(g) If a large quantity handler of universal waste receives a shipment containing hazardous waste that is not a universal waste, the handler shall immediately notify the Director of the illegal shipment, and provide the name, address, and phone number of the originating shipper. The Director shall provide instructions for managing the hazardous waste.

(h) If a large quantity handler of universal waste receives a shipment of non-hazardous, non-universal waste, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

R315-273-39. Standards for Universal Waste Management, Standards For Large Quantity Handlers Of Universal Waste -- Tracking Universal Waste Shipments.

(a) Receipt of shipments. A large quantity handler of universal waste shall keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received shall include the following information:

(1) The name and address of the originating universal waste handler or foreign shipper from whom the universal waste was sent;

(2) The quantity of each type of universal waste received;

(3) The date of receipt of the shipment of universal waste.

(b) Shipments off-site. A large quantity handler of universal waste shall keep a record of each shipment of universal waste sent from the handler to other facilities. The record may take the form of a log, invoice, manifest, bill of

lading or other shipping document. The record for each shipment of universal waste sent shall include the following information:

- (1) The name and address of the universal waste handler, destination facility, or foreign destination to whom the universal waste was sent;
- (2) The quantity of each type of universal waste sent;
- (3) The date the shipment of universal waste left the facility.

(c) Record retention.

(1) A large quantity handler of universal waste shall retain the records described in Subsection R315-273-39(a) for at least three years from the date of receipt of a shipment of universal waste.

(2) A large quantity handler of universal waste shall retain the records described in Subsection R315-273-39(b) for at least three years from the date a shipment of universal waste left the facility.

R315-273-40. Standards for Universal Waste Management, Standards for Large Quantity Handlers of Universal Waste -- Exports.

A large quantity handler of universal waste who sends universal waste to a foreign destination other than to those OECD countries specified in Subsection R315-262-58(a)(1), in which case the handler is subject to the requirements of Sections R315-262-80 through 89, shall:

- (a) Comply with the requirements applicable to a primary exporter in Section R315-262-53, Subsections R315-262-56(a)(1) through (4), (6), and (b) and Section R315-262-57;
- (b) Export such universal waste only upon consent of the receiving country and in conformance with the EPA Acknowledgement of Consent as defined in Sections R315-262-50 through 58; and
- (c) Provide a copy of the EPA Acknowledgement of Consent for the shipment to the transporter transporting the shipment for export.

R315-273-50. Standards for Universal Waste Management, Standards for Universal Waste Transporters -- Applicability.

Sections R315-273-50 through 56 apply to universal waste transporters, as defined in Section R315-273-9.

R315-273-51. Standards for Universal Waste Management, Standards for Universal Waste Transporters -- Prohibitions.

A universal waste transporter is:

- (a) Prohibited from disposing of universal waste; and
- (b) Prohibited from diluting or treating universal waste, except by responding to releases as provided in Section R315-273-54.

R315-273-52. Standards for Universal Waste Management, Standards for Universal Waste Transporters -- Waste Management.

(a) A universal waste transporter shall comply with all applicable U.S. Department of Transportation regulations in 49 CFR part 171 through 180 for transport of any universal waste that meets the definition of hazardous material in 49 CFR 171.8. For purposes of the Department of Transportation regulations, a material is considered a hazardous waste if it is subject to the Hazardous Waste Manifest Requirements of Rule R315-262. Because universal waste does not require a hazardous waste manifest, it is not considered hazardous waste under the Department of Transportation regulations.

(b) Some universal waste materials are regulated by the Department of Transportation as hazardous materials because they meet the criteria for one or more hazard classes specified in 49 CFR 173.2. As universal waste shipments do not require a manifest under Rule R315-262, they may not be described by

the DOT proper shipping name "hazardous waste, (l) or (s), n.o.s.", nor may the hazardous material's proper shipping name be modified by adding the word "waste".

R315-273-53. Standards for Universal Waste Management, Standards for Universal Waste Transporters -- Storage Time Limits.

- (a) A universal waste transporter may only store the universal waste at a universal waste transfer facility for ten days or less.
- (b) If a universal waste transporter stores universal waste for more than ten days, the transporter becomes a universal waste handler and shall comply with the applicable requirements of Sections R315-273-10 through 20 and 30 through 40 while storing the universal waste.

R315-273-54. Standards for Universal Waste Management, Standards for Universal Waste Transporters -- Response to Releases.

- (a) A universal waste transporter shall immediately contain all releases of universal wastes and other residues from universal wastes.
- (b) A universal waste transporter shall determine whether any material resulting from the release is hazardous waste, and if so, it is subject to all applicable requirements of Rules R315-260 through 266, 268 and 270. If the waste is determined to be a hazardous waste, the transporter is subject to Rule R315-262.

R315-273-55. Standards for Universal Waste Management, Standards for Universal Waste Transporters -- Off-site Shipments.

- (a) A universal waste transporter is prohibited from transporting the universal waste to a place other than a universal waste handler, a destination facility, or a foreign destination.
- (b) If the universal waste being shipped off-site meets the Department of Transportation's definition of hazardous materials under 49 CFR 171.8, the shipment shall be properly described on a shipping paper in accordance with the applicable Department of Transportation regulations under 49 CFR part 172.

R315-273-56. Standards for Universal Waste Management, Standards for Universal Waste Transporters -- Exports.

A universal waste transporter transporting a shipment of universal waste to a foreign destination other than to those OECD countries specified in Subsection R315-262-58(a)(1), in which case the transporter is subject to the requirements of Sections R315-262-80 through 89, may not accept a shipment if the transporter knows the shipment does not conform to the EPA Acknowledgment of Consent. In addition the transporter shall ensure that:

- (a) A copy of the EPA Acknowledgment of Consent accompanies the shipment; and
- (b) The shipment is delivered to the facility designated by the person initiating the shipment.

R315-273-60. Standards for Universal Waste Management, Standards for Destination Facilities -- Applicability.

- (a) The owner or operator of a destination facility, as defined in Section R315-273-9, is subject to all applicable requirements of Rules R315-264, 265, 266, 268, 270, and 124, and the notification requirement under section 3010 of RCRA.
- (b) The owner or operator of a destination facility that recycles a particular universal waste without storing that universal waste before it is recycled shall comply with Subsection R315-261-6(c)(2).

R315-273-61. Standards for Universal Waste Management, Standards for Destination Facilities -- Off-site Shipments.

(a) The owner or operator of a destination facility is prohibited from sending or taking universal waste to a place other than a universal waste handler, another destination facility or foreign destination.

(b) The owner or operator of a destination facility may reject a shipment containing universal waste, or a portion of a shipment containing universal waste. If the owner or operator of the destination facility rejects a shipment or a portion of a shipment, he shall contact the shipper to notify him of the rejection and to discuss reshipment of the load. The owner or operator of the destination facility shall:

(1) Send the shipment back to the original shipper, or

(2) If agreed to by both the shipper and the owner or operator of the destination facility, send the shipment to another destination facility.

(c) If the owner or operator of a destination facility receives a shipment containing hazardous waste that is not a universal waste, the owner or operator of the destination facility shall immediately notify the Director of the illegal shipment, and provide the name, address, and phone number of the shipper. The Director shall provide instructions for managing the hazardous waste.

(d) If the owner or operator of a destination facility receives a shipment of non-hazardous, non-universal waste, the owner or operator may manage the waste in any way that is in compliance with applicable federal or state solid waste regulations.

R315-273-62. Standards for Universal Waste Management, Standards for Destination Facilities -- Tracking Universal Waste Shipments.

(a) The owner or operator of a destination facility shall keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received shall include the following information:

(1) The name and address of the universal waste handler, destination facility, or foreign shipper from whom the universal waste was sent;

(2) The quantity of each type of universal waste received;

(3) The date of receipt of the shipment of universal waste.

(b) The owner or operator of a destination facility shall retain the records described in Subsection R315-273-62(a) for at least three years from the date of receipt of a shipment of universal waste.

R315-273-70. Standards for Universal Waste Management -- Imports.

Persons managing universal waste that is imported from a foreign country into the United States are subject to the applicable requirements of Rule R315-273, immediately after the waste enters the United States, as indicated in Subsection R315-273-70(a) through (c):

(a) A universal waste transporter is subject to the universal waste transporter requirements of Sections R315-273-50 through 56.

(b) A universal waste handler is subject to the small or large quantity handler of universal waste requirements of Sections R315-273-10 through 20 or 30 through 40, as applicable.

(c) An owner or operator of a destination facility is subject to the destination facility requirements of Sections R315-273-60 through 62.

(d) Persons managing universal waste that is imported from an OECD country as specified in Subsection R315-262-58(a)(1) are subject to Subsections R315-273-70(a) through (c), in addition to the requirements of Sections R315-262-80 through 89.

R315-273-80. Standards for Universal Waste Management, Petitions to Include Other Wastes Under Rule R315-273 -- General.

(a) Any person seeking to add a hazardous waste or a category of hazardous waste to Rule R315-273 may petition for a regulatory amendment under Sections R315-273-80 and 81 and Sections R315-260-20 and 23.

(b) To be successful, the petitioner shall demonstrate to the satisfaction of the Board that regulation under the universal waste regulations of Rule R315-273 is: appropriate for the waste or category of waste; will improve management practices for the waste or category of waste; and will improve implementation of the hazardous waste program. The petition shall include the information required by Subsection R315-260-20(b). The petition should also address as many of the factors listed in Section R315-273-81 as are appropriate for the waste or waste category addressed in the petition.

(c) The Board shall evaluate petitions using the factors listed in Section R315-273-81. The Board shall grant or deny a petition using the factors listed in Section R315-273-81. The decision shall be based on the weight of evidence showing that regulation under Rule R315-273 is appropriate for the waste or category of waste, shall improve management practices for the waste or category of waste, and shall improve implementation of the hazardous waste program.

(d) The Board may request additional information needed to evaluate the merits of the petition.

R315-273-81. Standards for Universal Waste Management -- Factors for Petitions to Include Other Wastes Under Rule R315-273.

(a) The waste or category of waste, as generated by a wide variety of generators, is listed in Sections R315-261-30 through 3, or, if not listed, a proportion of the waste stream exhibits one or more characteristics of hazardous waste identified in Sections R315-261-20 through 24. When a characteristic waste is added to the universal waste regulations of this Rule R315-273 by using a generic name to identify the waste category, e.g., batteries, the definition of universal waste in Section R315-260-10 and Section R315-273-9 shall be amended to include only the hazardous waste portion of the waste category, e.g., hazardous waste batteries. Thus, only the portion of the waste stream that does exhibit one or more characteristics, i.e., is hazardous waste, is subject to the universal waste regulations of Rule R315-273;

(b) The waste or category of waste is not exclusive to a specific industry or group of industries, is commonly generated by a wide variety of types of establishments, including, for example, households, retail and commercial businesses, office complexes, conditionally exempt small quantity generators, small businesses, government organizations, as well as large industrial facilities;

(c) The waste or category of waste is generated by a large number of generators, e.g., more than 1,000 nationally, and is frequently generated in relatively small quantities by each generator;

(d) Systems to be used for collecting the waste or category of waste, including packaging, marking, and labeling practices, would ensure close stewardship of the waste;

(e) The risk posed by the waste or category of waste during accumulation and transport is relatively low compared to other hazardous wastes, and specific management standards proposed or referenced by the petitioner, e.g., waste management requirements appropriate to be added to Sections R315-273-13, 33, and 52; and/or applicable Department of Transportation requirements, would be protective of human health and the environment during accumulation and transport;

(f) Regulation of the waste or category of waste under Rule R315-273 will increase the likelihood that the waste will be diverted from non-hazardous waste management systems;

e.g., the municipal waste stream, non-hazardous industrial or commercial waste stream, municipal sewer or stormwater systems; to recycling; treatment; or disposal in compliance with Title 19 Chapter 6.

(g) Regulation of the waste or category of waste under Rule R315-273 will improve implementation of and compliance with the hazardous waste regulatory program; and/or

(h) Such other factors as may be appropriate.

KEY: hazardous waste
April 15, 2016

19-6-105
19-6-106

**R384. Disease Control and Prevention, Health Promotion.
R384-415. Electronic-Cigarette Substance Standards.
R384-415-1. Authority and Purpose.**

(1) This rule is authorized by Section 26-57-103 and Subsection 59-14-803(5).

(2) This rule establishes standards for labeling, nicotine content, packaging, and product quality for electronic-cigarette substances for the regulation of electronic-cigarettes.

(3) This rule does not apply to a manufacturer-sealed electronic-cigarette substance.

(4) A product in compliance with this rule is not endorsed as safe.

R384-415-2. Definitions.

As used in this rule:

(1) "Artificial coloring" means the same as the term is defined in 21 C.F.R. 101.22(a)(4) (April 1, 2015) and as the term "color additive" is defined in 21 C.F.R. 70.3(f) (April 1, 2015).

(2) "Artificial flavoring" means the same as the term is defined in 21 C.F.R. 101.22(a)(1) (April 1, 2015).

(3) "Batch number" means the same as the term "lot number, control number, or batch number" is defined in 21 C.F.R. 210.3(b)(11) (April 1, 2015).

(4) "Business" means any sole proprietorship, partnership, joint venture, corporation, association, or other entity formed for profit or non-profit purposes.

(5) "Child resistant" means the same as the term "special packaging" is defined in 16 C.F.R. 1700.1(a)(4) (January 1, 2015) and is tested in accordance with the method described in 16 C.F.R. 1700.20 (January 1, 2015).

(6) "Department" means the Utah Department of Health.

(7) "Electronic-cigarette" means the same as the term is defined in Subsections 26-38-2(1) and 59-14-802(2).

(8) "Electronic-cigarette Product" means the same as the term is defined in Subsection 59-14-802(3).

(9) "Electronic-cigarette substance" means the same as the term is defined in Subsection 59-14-802(4).

(10) "EP standards" means the standards established for medicines by the European Pharmacopeia, the European equivalent of the United States Pharmacopeia. The EP standards define requirements for the qualitative and quantitative composition of medicines, and the tests that are to be used on medicines, substances, and materials used in their production.

(11) "Generally Recognized As Safe" means an United States Food and Drug Administration designation that a substance added to food is generally recognized, by qualified experts, as having been adequately shown to be safe under the conditions of its intended use, as found in 21 C.F.R. 170.30 (April 1, 2015). Such a substance is exempted from the usual Federal Food, Drug, and Cosmetic Act, 21 U.S.C. Sec. 301 et seq. (2013).

(12) "Local health department" means the same as the term is defined in Subsection 26A-1-102(5).

(13) "Manufacture" means the same as the term is defined in Subsection 26-57-102(5).

(14) "Manufacturer" means the same as the term is defined in Subsection 26-57-102(6).

(15) "Mg/mL" means milligrams per milliliter, a ratio for measuring an ingredient, in liquid form, where accuracy is measured in milligrams per milliliter, or a percentage equivalent.

(16) "Natural flavoring" means the same as the term is defined in 21 C.F.R. 101.22(a)(3) (April 1, 2015).

(17) "Nicotine" means the same as the term is defined in the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. Sec. 387(12) (2013).

(18) "Manufacturer-sealed electronic-cigarette substance" means the same as the term defined is in Subsection 26-57-102(6).

(19) "Pharmaceutical" means a compound manufactured for use as a medicinal drug.

(20) "Retailer" means any person who sells, offers for sale, or offers to exchange for any form of consideration, an electronic-cigarette substance to a consumer. This definition is without regard to the quantity of an electronic-cigarette substance sold, offered for sale, exchanged, or offered for exchange.

(21) "Retailing" means involvement in any of the activities listed in Subsection R384-415-2(20). This definition is without regard to the quantity of an electronic-cigarette substance sold, offered for sale, exchanged, or offered for exchange.

(22) "Straight color" means a color additive approved for human consumption in food and drugs as listed in 21 C.F.R. 73.1 through 21 C.F.R. 73.1991 (April 1, 2015), 21 C.F.R. 74.101 through 21 C.F.R. 74.1711 (April 1, 2015), and 21 C.F.R. 81.1 (April 1, 2015), and includes substances as are permitted by the specifications for such color.

(23) "Tamper-evident" means the packaging uses an indicator or barrier to entry that is distinctive by design, or must employ an identifying characteristic.

(24) "Transaction statement" means a statement, in paper or electronic form, which the manufacturer transferring ownership of the product certifies that the electronic-cigarette substance is in compliance with the standards in this rule.

(25) "USFDA Food Standards" means the United States Food and Drug Administration's common designation for standards of identity, standards of quality, and standards of fill of container promulgated under the Federal Food, Drug and Cosmetic Act, 21 U.S.C. Sec. 301 et seq. (2013) and as contained in 21 C.F.R. 130 through 21 C.F.R. 169 (April 1, 2015).

(26) "USP-NF standards" means the standards for drug products established by the United States Pharmacopeia and National Formulary. The USP-NF standards include standards for chemical and biological drug substances, dosage forms, compounded preparations, excipients, medical devices, and dietary supplements.

R384-415-3. General Labeling.

(1) The retailer shall ensure that a container holding an electronic-cigarette substance offered for sale to the consumer conforms to the following labeling standards:

(a) the label is smear resistant; and

(b) the label clearly displays:

(i) the nicotine content in mg/mL or percent by volume;

(ii) the manufacturer name;

(iii) the batch number;

(iv) the ingredients, as required in Section R384-415-4;

(v) a tamper-evident warning, which meets the requirements of Section R384-415-5; and

(vi) a safety warning, which meets the requirements of Section R384-415-6.

R384-415-4. Labeling of Ingredients.

(1) The retailer shall ensure that:

(a) an ingredient of an electronic-cigarette substance is listed on the label of the container holding an electronic-cigarette substance, except as provided for in Subsection R384-415-4(1)(c)(i).

(b) An artificial coloring ingredient is listed on the label using the classification system that best applies. Classification systems include:

(i) Food, Drug, and Cosmetic color designation and number;

(ii) Drug and Cosmetic color designation and number; or

(iii) the generic straight color name, if the artificial color is not classified under the systems found in Subsection R384-415-4(1)(b)(i) or Subsection R384-415-4(1)(b)(ii).

(c)(i) An ingredient included in the manufacturer's proprietary mixture of flavorings is exempt from being listed on the label by name.

(ii) An ingredient included in the manufacturer's proprietary mixture of flavorings is listed on the label under the generic term of artificial flavoring, natural flavoring, or both.

R384-415-5. Labeling of Tamper-Evident Warning.

(1) The retailer shall ensure that the label of an electronic-cigarette substance displays a tamper-evident warning alerting the consumer to the tamper-evident feature of the packaging

(2) The retailer shall ensure that the tamper-evident warning:

- (a) is prominently displayed to consumers;
- (b) is placed on the label so that it would be unaffected if the tamper-evidence feature is removed; and
- (c) lists the type of tamper-evident feature used with the product.

R384-415-6. Labeling of Safety Warning.

(1) The retailer shall ensure that an electronic-cigarette substance offered for sale to the consumer features a safety warning stating "nicotine is addictive and poisonous. Keep away from children and pets".

(2) The retailer shall ensure that the safety warning:

- (a) occupies at least 20 percent of the largest panel of the container and any additional immediate packaging;
- (b) is in capitalized letters;
- (c) has a font size that occupies the maximum amount of the area described in Subsection R384-415-6(2)(a);
- (d) uses the Helvetica, Arial, or Univers font; and
- (e) uses either a black font on a white background or a white font on a black background.

R384-415-7. Nicotine Content.

(1) The retailer shall comply with the following nicotine content standards regarding an electronic-cigarette substance sold to the consumer:

- (a) The nicotine content for an electronic-cigarette substance is limited to 360 mg per container, and does not exceed a 24mg/mL concentration.
- (b) The nicotine level for an electronic-cigarette substance is limited to a 10% variation in mg/mL above the content level indicated on the label.
- (c) An electronic-cigarette substance labeled 0 mg/mL or 0% by volume contains no nicotine.

R384-415-8. Packaging.

(1) The retailer shall ensure that the packaging of an electronic-cigarette substance intended for sale to a consumer:

- (a) is certified as child resistant, and compliant with federal standards and law concerning child nicotine poisoning prevention;
- (b) does not leak at the time of sale; and
- (c) utilizes a tamper-evident feature by means of one or more of the following:
 - (i) a bubble pack;
 - (ii) a heat shrink band;
 - (iii) a breakable cap; or
 - (iv) an inner-seal.

R384-415-9. Product Quality.

(1) The retailer shall ensure that an ingredient in an electronic-cigarette substance is compliant with either USP-NF standards, EP standards, USFDA Food Standards, or is Generally Recognized As Safe at the time of sale.

(2) The retailer shall be prohibited from selling an electronic-cigarette substance that contains:

- (a) vitamins or other additives that create the impression

that an electronic-cigarette substance has a health benefit or presents reduced health risks;

- (b) pharmaceuticals;
- (c) caffeine or taurine or other additives and stimulant compounds that are associated with energy and vitality;
- (d) illegal or controlled substances as identified in Section 58-37-3; and
- (e) additives having coloring properties for emissions.

R384-415-10. Record Keeping and Testing.

(1) The retailer shall provide the electronic-cigarette substances transaction statement to the Department or the local health department within five working days of a request. The retailer shall ensure that the transaction statement includes manufacturer certifications that:

- (a) the nicotine content of an electronic-cigarette substance is compliant with Section R384-415-7;
- (b) the packaging of an electronic cigarette-substance is child-resistant; and
- (c) an ingredient used in an electronic-cigarette substance meets the appropriate standard found in Section R384-415-9.

(2)(a) The retailer shall have a system in place to trace production of an electronic-cigarette substance through the labeled batch number to the ingredients used in manufacturing.

(b) The retailer shall provide documents produced from batch tracing to the enforcing agency within five working days of a request.

(c) The retailer shall ensure that documents produced through batch tracing provide evidence in support of the electronic-cigarette substances transaction statement.

(3)(a) The retailer shall have access to the documents described in Subsections R384-415-10(1) and R384-415-10(2) for a period of two years after the retailer purchases the electronic-cigarette substance.

(b) the retailer shall provide the documents described in Subsections R384-415-10(1) and R384-415-10(2) to the Department or the local health department within 5 working days of a request.

R384-415-11. Enforcement.

(1) The Department may enforce and seek penalties for the violation of public health rules including, the standards for electronic cigarettes set forth in this rule as prescribed in Sections 26-23-1 through 26-23-10.

(2) A local health department may enforce and seek penalties for the violation of the standards for electronic cigarettes set forth in this rule. A local health department shall have authority to enforce and seek penalties for violations of public health law including this rule as is found in Sections 26-23-1 through 26-23-10, 26A-1-108, 26A-1-114(1) and 26A-1-123.

(3) The Department or local health department is responsible to make a determination as to if a person holding a Utah State Tax Commission license to sell electronic cigarettes has violated the standards of this rule. If the Department or local health department makes such a determination it shall notify the Utah State Tax Commission to revoke the person's license as provided in Subsection 59-14-803(5).

(4) Administrative or civil enforcement of this rule by the Department or local health departments does not preclude criminal enforcement by a law enforcement agency and prosecution of any violation of the standards in this rule that can constitute a criminal offense under state law.

**KEY: electronic cigarettes, nicotine, standards, Electronic Cigarette Regulation Act
April 15, 2016**

**26-57-103
59-14-803(5)**

R386. Health, Disease Control and Prevention, Epidemiology.

R386-702. Communicable Disease Rule.

R386-702-1. Purpose Statement.

(1) The Communicable Disease Rule is adopted under authority of Sections 26-1-30, 26-6-3, and 26-23b.

(2) This rule outlines a multidisciplinary approach to communicable and infectious disease control and emphasizes reporting, surveillance, isolation, treatment and epidemiological investigation to identify and control preventable causes of infectious diseases. Reporting requirements and authorizations are specified for communicable and infectious diseases, outbreaks, and unusual occurrence of any disease. Each section has been adopted with the intent of reducing disease morbidity and mortality through the rapid implementation of established practices and procedures.

(3) The successes of medicine and public health dramatically reduced the risk of epidemics and early loss of life due to infectious agents during the twentieth century. However, the emergence of diseases such as Middle Eastern Respiratory Syndrome (MERS), and the rapid spread of diseases such as West Nile virus to the United States from other parts of the world, made possible by advances in transportation, trade, food production, and other factors, highlight the continuing threat to health from infectious diseases. Continual attention to these threats and cooperation among all health care providers, government agencies, and other entities that are partners in protecting the public's health are crucial to maintain and improve the health of the citizens of Utah.

R386-702-2. Definitions.

(1) Terms in this rule are defined in Section 26-6-2 and 26-23b-102, except that for purposes of this rule, "Department" means the Utah Department of Health.

(2) In addition, for purposes of this rule:

(a) "Outbreak" means an increase in incidence of disease, or two or more cases of disease with a common exposure.

(b) "Case" means a person identified as having a disease, health disorder, or condition that meets criteria for being reportable under this rule, or that is otherwise under public health investigation.

(c) "Suspect case" means a person who a reporting entity, local health department, or Department believes might be a case, but for whom it has not been established that the criteria necessary to become a case have been met.

(d) "Good Samaritan" means a person who gives reasonable aid to strangers in grave physical distress.

R386-702-3. Reportable Diseases, Emergency Illnesses, and Health Conditions.

(1) The Utah Department of Health declares the following conditions to be of concern to public health and reportable as required or authorized by Section 26-6-6 and Title 26, Chapter 23b of the Utah Health Code.

(a) Acinetobacter species, from any clinical specimen, that is resistant to at least one carbapenem-class antibiotic, or that has demonstrated carbapenemase production

(b) Acquired Immunodeficiency Syndrome

(c) Acute Flaccid Myelitis (AFM)

(d) Adverse event resulting from smallpox vaccination

(e) Anaplasmosis

(f) Anthrax

(g) Arbovirus infection, including Saint Louis encephalitis and West Nile virus infection

(h) Babesiosis

(i) Botulism

(j) Brucellosis

(k) Campylobacteriosis

(l) Chancroid

(m) Chickenpox

(n) Chlamydia trachomatis infection

(o) Cholera

(p) Clostridium difficile, reported via electronic laboratory reporting (ELR) only. Applicable only to laboratories and hospitals currently participating in ELR.

(q) Coccidioidomycosis

(r) Colorado tick fever

(s) Creutzfeldt-Jakob disease and other transmissible human spongiform encephalopathies

(t) Cryptosporidiosis

(u) Cyclospora infection

(v) Cytomegalovirus (CMV), congenital, via ELR (see Utah Administrative Rule R398-4-5 and R386-702-4 (2)(b))

(w) Dengue fever

(x) Diphtheria

(y) Ehrlichiosis, human granulocytic, human monocytic, or unspecified

(z) Encephalitis

(aa)(1) Escherichia coli, from any clinical specimen, that is resistant to at least one carbapenem-class antibiotic, or that has demonstrated carbapenemase production

(aa)(2) Shiga toxin-producing Escherichia coli (STEC) infection

(bb) Enterobacter species, from any clinical specimen, that is resistant to at least one carbapenem-class antibiotic, or that has demonstrated carbapenemase production

(cc) Giardiasis

(dd) Gonorrhea: sexually transmitted and ophthalmia neonatorum

(ee) Haemophilus influenzae, invasive disease

(ff) Hansen Disease (Leprosy)

(gg) Hantavirus pulmonary syndrome (Sin Nombre virus)

(hh) Hemolytic Uremic Syndrome, postdiarrheal

(ii) Hepatitis A

(jj) Hepatitis B, acute, chronic, and perinatal

(kk) Hepatitis C

(ll) Hepatitis, other viral

(mm)(1) Human Immunodeficiency Virus Infection. Special measures for the control of HIV/AIDS are included in R386-702-9.

(nn)(2) Pregnancy in a HIV case

(oo) Influenza-associated hospitalization

(pp) Influenza-associated death, in a person less than 18 years of age

(qq) Klebsiella species, from any clinical specimen, that is resistant to at least one carbapenem-class antibiotic, or that has demonstrated carbapenemase production

(rr) Legionellosis

(ss) Leptospirosis

(tt) Listeriosis

(uu) Lyme Disease

(vv) Malaria

(ww) Measles

(xx) Meningitis (aseptic, bacterial, fungal, parasitic, protozoan, and viral)

(yy) Meningococcal Disease

(zz) Mumps

(aaa) Mycobacteria other than tuberculosis

(bbb) Norovirus, outbreaks only

(ccc) Pertussis

(ddd) Plague

(eee) Poliomyelitis, paralytic and nonparalytic

(fff) Psittacosis

(ggg) Q Fever (Coxiella infection)

(hhh) Rabies, human and animal

(iii) Relapsing fever, tick-borne and louse-borne

(jjj) Rubella, including congenital syndrome

(kkk) Salmonellosis

- (lll) Severe Acute Respiratory Syndrome (SARS)
- (mmm) Shigellosis
- (nnn) Smallpox
- (ooo) Spotted fever rickettsioses (including Rocky Mountain Spotted Fever)
- (ppp) Staphylococcus aureus from any clinical specimen with resistance or intermediate resistance to vancomycin isolated from any site
- (qqq)(1) Streptococcal disease, invasive, due to Streptococcus pneumoniae and Groups A and B isolated from a normally sterile site
- (qqq)(2) Streptococcal disease, invasive, other, reported via ELR only. Applicable only to laboratories and hospitals currently participating in ELR.
- (rrr) Syphilis, all stages and congenital
- (sss) Tetanus
- (ttt) Toxic-Shock Syndrome, staphylococcal or streptococcal
- (uuu) Trichinellosis
- (vvv) Tuberculosis. Special Measures for the Control of Tuberculosis are listed in R388-804.
- (www) Tularemia
- (xxx) Typhoid, cases and carriers
- (yyy) Vibriosis
- (zzz) Viral hemorrhagic fever
- (aaaa) Yellow fever
- (bbbb) Any unusual occurrence of infectious or communicable disease or any unusual or increased occurrence of any illness that may indicate a bioterrorism event or public health hazard, including any single case or multiple cases of a newly recognized, emergent or re-emergent disease or disease-producing agent, including newly identified multi-drug resistant bacteria or a novel influenza strain such as a pandemic influenza strain.
- (cccc) Any outbreak, epidemic, or unusual or increased occurrence of any illness that may indicate an outbreak or epidemic. This includes suspected or confirmed outbreaks of foodborne disease, waterborne disease, meningitis, encephalitis, disease caused by antimicrobial resistant organisms, any infection that may indicate a bioterrorism event, or of any infection that may indicate a public health hazard.
- (2) In addition to the reportable conditions set forth in R386-702-3(1) the Department declares the following reportable emergency illnesses, health conditions, and patient encounter information to be of public health importance and reporting is authorized by Title 26, Chapter 23b, Utah Code, unless made mandatory by the declaration of a public health emergency:
- (a) respiratory illness (including upper or lower respiratory tract infections, difficulty breathing and Adult Respiratory Distress Syndrome);
- (b) gastrointestinal illness (including vomiting, diarrhea, abdominal pain, or any other gastrointestinal distress);
- (c) influenza-like constitutional symptoms and signs;
- (d) neurologic symptoms or signs indicating the possibility of meningitis, encephalitis, or unexplained acute encephalopathy or delirium;
- (e) rash illness;
- (f) hemorrhagic illness;
- (g) botulism-like syndrome;
- (h) lymphadenitis;
- (i) sepsis or unexplained shock;
- (j) febrile illness (illness with fever, chills or rigors);
- (k) nontraumatic coma or sudden death;
- (l) other criteria specified by the Department as indicative of disease outbreaks or injurious exposures of uncertain origin; and
- (m) patient encounter data including, but not limited to, chief complaint and discharge diagnosis data from healthcare settings which support early identification and ruling out of

public health threats, disasters, disease outbreaks, suspected incidents, and acts of bioterrorism; assist in characterizing population groups at greatest risk for disease or injury; support assessment of the severity and magnitude of possible threats; or satisfy syndromic surveillance objectives of the Federal Centers for Medicaid and Medicare Meaningful Use incentive program.

R386-702-4. Reporting.

(1) Who must report: Each reporting entity shall report each confirmed case, and any individual, who the reporting entity believes, in its professional judgment, is likely to harbor an illness, infection, or condition reportable under R386-702-3(1), and each outbreak, epidemic, or unusual occurrence described in R386-702-3(1)(bbbb) or (cccc) to the local health department or to the Bureau of Epidemiology, Utah Department of Health. Unless otherwise specified, the report of these diseases to the local health department or to the Bureau of Epidemiology, Utah Department of Health shall provide the following information: name, age, sex, address, date of onset, and all other information as prescribed by the Department. A standard report form has been adopted and is supplied to physicians and other reporting entities by the Department. Upon receipt of a report, the local health department shall promptly forward a written or electronic copy of the report to the Bureau of Epidemiology, Utah Department of Health.

(2) Time frames for reporting:

(a) Manual reporting:

(i) Where immediate reporting is required as noted in R386-702-4 (4), the reporting entity shall report as soon as possible, but not later than 24 hours after identification. Immediate reporting shall be made by telephone to the local health department or to the Bureau of Epidemiology, Utah Department of Health at 801-538-6191 or 888-EPI-UTAH (888-374-8824).

(ii) All diseases not required to be reported immediately shall be reported within three working days from the time of identification. Reporting entities shall send reports to the local health department by phone, secured fax, secured email, or mail; or to the Bureau of Epidemiology by phone (801-538-6191), secured fax (801-538-9923), secured email (please contact the Bureau of Epidemiology at 801-538-6191 for information on this option), or by mail (288 North 1460 West, P. O. Box 142104, Salt Lake City, Utah 84114-2104).

(b) Electronic reporting:

(i) Hospitals and laboratories are encouraged to report case information electronically in a manner approved of by the Department if the laboratory has the capacity to do so. Refer to <https://health.utah.gov/phaccess/public/elr/> for information about this option. Please contact the Bureau of Epidemiology at 801-538-6191 for questions regarding this option.

(ii) When more than one licensed laboratory or hospital is involved in testing a specimen, all entities involved are required to report results.

(iii) All entities that report electronically shall either choose to report on demand (as each report is released) or batch reports every 24 hours (including holidays and weekends if the entity is open).

(iv) The following requirements apply to laboratories that are reporting information electronically:

(1) Laboratories reporting electronically shall send the following information with all reports:

(A) First and last name of the patient;

(B) Patient date of birth;

(C) Patient hospitalization status;

(D) Name of the reporting facility;

(E) Name of the testing laboratory;

(F) Patient address (including street address, unit/apartment number, city, state, and zip code);

(G) Name and phone number of the requesting health care

provider;

- (H) Pregnancy status;
- (I) Specimen source;
- (J) The laboratory's name for, or description of, the test;
- (K) Testing results;
- (L) Test reference range; and
- (M) Test status (e.g. preliminary, final, amended and/or corrected).

(2) Hospitals reporting electronically shall use HL7 2.5.1 message structure and standard LOINC and SNOMED terminology in accordance with Meaningful Use regulations. Laboratories reporting electronically shall use HL7 2.3.1 or 2.5.1 message structure for all fields and appropriate LOINC codes designating the test performed.

(3) Laboratories reporting electronically shall submit all local vocabulary codes with translations to UDOH, if applicable.

(4) Laboratories reporting electronically must report preliminary positive results for immediately notifiable conditions as specified in R386-702-4 (4).

(c) Electronic reporting of negative results:

(i) Electronic reporting shall include negative as well as positive results for the following conditions:

- (1) Chlamydia
- (2) Cytomegalovirus (CMV), congenital (see Utah Administrative Rule R398-4-5 and R386-702-4 (2)(b)(i))
- (3) Gonorrhea
- (4) Hepatitis A
- (5) Hepatitis B
- (6) Hepatitis C, including viral loads
- (7) Human Immunodeficiency Virus (HIV), including viral loads and confirmatory tests
- (8) Lyme disease
- (9) Syphilis
- (10) Tuberculosis

(ii) Negative test results reported for these conditions will be used for the following purposes as authorized in Utah Health Code Section 26-1-30(2)(c),(d), and (f):

(1) To determine when a previously reported case becomes non-infectious;

(2) To identify newly acquired infections through identification of a seroconversion window; or

(3) To provide information critical for assignment of a case definition.

(iii) Information associated with a negative test result will be retained by the Utah Department of Health for a period of 18 months.

(1) At the end of the 18 month period, if the result has not been appended to an existing case, personal identifiers will be stripped and expunged from the result.

(2) The de-identified result will be added to a de-identified, aggregate dataset which will be retained for use by public health to analyze trends associated with testing patterns and case distribution, enabling identification and establishment of prevention and intervention efforts for at-risk populations, and assessment of trends over time in those populations, as authorized by Utah Health Code 26-1-30(2)(f).

(3) Entities Required to Report Communicable Diseases: Title 26, Chapter 6, Section 6 Utah Code lists those individuals and facilities required to report diseases known or suspected of being communicable.

(a) Physicians, hospitals, health care facilities, home health agencies, health maintenance organizations, and other health care providers shall report details regarding each case.

(b) Schools, child care centers, and citizens shall provide any relevant information.

(c) Laboratories and other testing sites shall report laboratory evidence of any of the reportable diseases. Laboratories and other testing sites shall also report any test result that provides presumptive evidence of infection, which

may include positive tests for HIV, syphilis, measles, viral hepatitis, and tuberculosis. This would also include reporting ordered tests for Creutzfeldt-Jakob disease and other prion diseases.

(i) Detailed lists of reportable laboratory events, e.g. laboratory tests and results that signify a reportable condition, are found at: <https://health.utah.gov/phaccess/public/elr/>; click on "Spreadsheet of Reportable Events and Vocabulary" to access this list.

(ii) Events noted within the "Spreadsheet of Reportable Events and Vocabulary" constitute those that are reportable according to this Rule, and as such are considered mandatory for laboratories to report.

(iii) The "Spreadsheet of Reportable Events and Vocabulary" defines, for laboratory reporting purposes, those unusual occurrences of conditions as noted in R386-702-3 (1)(bbbb) and (cccc).

(d) Pharmacists shall report unusual prescriptions or patterns of prescribing as specified in section 26-23b-105.

(4) Immediately Reportable Conditions: Case and suspect case reports of anthrax, botulism (except for infant botulism), cholera, Creutzfeldt-Jakob disease and other suspected prion diseases, diphtheria, Haemophilus influenzae (invasive disease), hepatitis A, measles, meningococcal disease, plague, poliomyelitis, rabies, rubella (excluding congenital syndrome), Severe Acute Respiratory Syndrome (SARS), smallpox, Staphylococcus aureus with resistance (VRSA) or intermediate resistance (VISA) to vancomycin isolated from any site, tuberculosis, tularemia, typhoid, viral hemorrhagic fever, yellow fever, and any condition described in R386-702-3(1)(bbbb) or (cccc) are to be made immediately as provided in R386-702-4(2).

(5) Mandatory Submission of Clinical Material:

(a) Laboratories shall submit clinical material from all cases identified with organisms listed in (5)(c) below to the Utah Department of Health, Utah Public Health Laboratory (UPHL). Clinical material is defined as:

(i) A clinical isolate containing the infectious organism for which submission of material is required, or

(ii) If an isolate is not available, material containing the infectious organism for which submission of material is required, in the following order of preference:

- (A) a patient specimen;
- (B) nucleic acid; or
- (C) other laboratory material.

(b) Laboratories should alert UPHL via telephone during business hours at (801) 965-2400, or after hours at (801) 560-6586, of all bioterrorism (BT) agents that are being submitted. BT agents are marked below (as (BT)) with other organisms mandated for submission.

(c) Organisms that are mandated for clinical submission in Utah include:

- (i) Bacillus anthracis (BT);
- (ii) Brucella species (BT);
- (iii) Campylobacter species;
- (iv) Clostridium botulinum (BT);
- (v) Corynebacterium diphtheriae;
- (vi) Shiga toxin-producing Escherichia coli (STEC) (including enrichment and/or MacConkey broths that tested positive by enzyme immunoassay for Shiga toxin);
- (vii) Francisella tularensis (BT);
- (viii) Haemophilus influenzae, from normally sterile sites;
- (ix) Influenza virus (hospitalized cases only);
- (x) Legionella species;
- (xi) Listeria monocytogenes;
- (xii) Measles (rubeola);
- (xiii) Mycobacterium tuberculosis complex;
- (xiv) Neisseria gonorrhoeae;
- (xv) Neisseria meningitidis, from normally sterile sites;

(xvi) *Salmonella* species;
 (xvii) *Shigella* species;
 (xviii) *Staphylococcus aureus* with resistance or intermediate resistance to vancomycin isolated from any site;
 (xix) *Vibrio* species;
 (xx) West Nile virus;
 (xxi) *Yersinia* species (*Yersinia pestis*, BT); and
 (xxii) any organism implicated in an outbreak when instructed by authorized local or state health department personnel.

(6) Full reporting of all relevant patient information related to laboratory-confirmed influenza is authorized and may be required by local or state health department personnel for purposes of public health investigation of a documented threat to public health.

(7) Reports of emergency illnesses, health conditions, and patient encounter information under R386-702-3(2) shall be made as soon as practicable using a process and schedule approved by the Department. Full reporting of all relevant patient information is authorized. The report shall include at least, if known:

- (a) name of the facility;
- (b) a patient identifier;
- (c) date of visit;
- (d) time of visit;
- (e) patient's age;
- (f) patient's sex;
- (g) zip code of patient's residence;
- (h) chief complaint(s), reason for visit, and/or diagnosis;

and

- (i) whether the patient was admitted to the hospital.

(8) An entity reporting emergency illnesses, health conditions, and patient encounter information under R386-702-3(2) is authorized to report on other encounters during the same time period that do not meet definition for a reportable emergency illness, health condition, or patient encounter. Submission of an isolate does not replace the requirement to report the case also to the local health department or Bureau of Epidemiology, Utah Department of Health. The report shall include the following information for each such encounter:

- (a) facility name;
- (b) date of visit;
- (c) time of visit;
- (d) patient's age;
- (e) patient's sex; and
- (f) patient's zip code for patient's residence.

(9) Epidemiological Review: The Department or local health department may conduct an investigation, including review of the hospital and health care facility medical records and contacting the individual patient to protect the public's health.

(10) Confidentiality of Reports:

(a) All reports required by this rule are confidential and are not open to public inspection. All information collected pursuant to this rule may not be released or made public, except as provided by Section 26-6-27. Penalties for violation of confidentiality are prescribed in Section 26-6-29.

(b) Nothing in this rule precludes the discussion of case information with an attending clinician or public health workers.

(c) Good Samaritans:

(i) The Department or local health department shall disclose communicable disease-related information regarding the person who was assisted to the medical provider of a good Samaritan when that medical provider submits a request to the Department or local health department. The request must include:

- (A) information regarding the occurrence of the accident, fire, or other life-threatening emergency,
- (B) a description of the exposure risk to the good

Samaritan, and

(C) contact information for the good Samaritan and their medical provider.

(ii) Information shall be provided to the medical provider of the good Samaritan only in order to ensure that:

- (A) appropriate education and follow-up is provided, and
- (B) confidentiality is maintained for the person who was

aided.

(iii) No identifying information will be shared regarding the person who was assisted with the good Samaritan or their medical provider. The good Samaritan shall receive written information warning them that information regarding the person who was assisted is protected by state law.

(11) If public health conducts a retrospective surveillance project, such as to assess completeness of case finding or assess another measure of data quality, the department may, at its discretion, waive any penalties for participating facilities, medical providers, laboratories, or other reporters if cases are found that were not originally reported for whatever reason.

R386-702-5. General Measures for the Control of Communicable Diseases.

(1) The local health department shall maintain all reportable disease records as needed to enforce Chapter 6 of the Health Code and this rule, or as requested by the Utah Department of Health.

(2) General Control Measures for Reportable Diseases.

(a) The local health department shall, when an unusual or rare disease occurs in any part of the state or when any disease becomes so prevalent as to endanger the state as a whole, contact the Bureau of Epidemiology, Utah Department of Health for assistance, and shall cooperate with the representatives of the Utah Department of Health.

(b) The local health department shall investigate and control the causes of epidemic, infectious, communicable, and other disease affecting the public health. The local health department shall also provide for the detection, reporting, prevention, and control of communicable, infectious, and acute diseases that are dangerous or important or that may affect the public health. The local health department may require physical examination and measures to be performed as necessary to protect the health of others.

(c) If, in the opinion of the local health officer it is necessary or advisable to protect the public's health that any person shall be kept from contact with the public, the local health officer shall establish, maintain and enforce involuntary treatment, isolation and quarantine as provided by Section 26-6-4. Control measures shall be specific to the known or suspected disease agent. Guidance is available from the Bureau of Epidemiology, Utah Department of Health or official reference listed in R386-702-12.

(3) Prevention of the Spread of Disease From a Case.

The local health department shall take action and measures as may be necessary within the provisions of Section 26-6-4; Title 26, Chapter 6b; and this rule, to prevent the spread of any communicable disease, infectious agent, or any other condition which poses a public health hazard. Action shall be initiated upon discovery of a case or upon receipt of notification or report of any disease.

(4) Prevention of the Spread of Disease or Other Public Health Hazard.

A case, suspected case, carrier, contact, other person, or entity (e.g. facility, hotel, organization) shall, upon request of a public health authority, promptly cooperate during:

(a) An investigation of the circumstances or cause of a case, suspected case, outbreak, or suspected outbreak.

(b) The carrying out of measures for prevention, suppression, and control of a public health hazard, including, but not limited to, procedures of restriction, isolation, and

quarantine.

(5) Public Food Handlers.

A person known to be infected with a communicable disease that can be transmitted by food or drink products, or who is suspected of being infected with such a disease, may not engage in the commercial handling of food or drink products, or be employed on any premises handling those types of products, unless those products are packaged off-site and remain in a closed container until purchased for consumption, until the person is determined by the local health department to be free of communicable disease, or incapable of transmitting the infection.

(6) Communicable Diseases in Places Where Food or Drink Products are Handled or Processed.

If a case, carrier, or suspected case of a disease that can be conveyed by food or drink products is found at any place where food or drink products are handled or offered for sale, or if a disease is found or suspected to have been transmitted by these food or drink products, the local health department may immediately prohibit the sale, or removal of drink and all other food products from the premises. Sale or distribution of food or drink products from the premises may be resumed when measures have been taken to eliminate the threat to health from the product and its processing as prescribed by R392-100.

(7) Request for State Assistance.

If a local health department finds it is not able to completely comply with this rule, the local health officer or his representative shall request the assistance of the Utah Department of Health. In such circumstances, the local health department shall provide all required information to the Bureau of Epidemiology. If the local health officer fails to comply with the provisions of this rule, the Utah Department of Health shall take action necessary to enforce this rule.

(8) Approved Laboratories.

Laboratory analyses that are necessary to identify the causative agents of reportable diseases or to determine adequacy of treatment of patients with a disease shall be ordered by the physician or other health care provider to be performed in or referred to a laboratory holding a valid certificate under the Clinical Laboratory Improvement Amendments of 1988.

R386-702-6. Special Measures for Control of Rabies.

(1) Rationale of Treatment.

A physician must evaluate individually each exposure to possible rabies infection. The physician shall also consult with local or state public health officials if questions arise about the need for rabies prophylaxis.

(2) Management of Biting Animals.

(a) A healthy dog, cat, or ferret that bites a person shall be confined and observed at least daily for ten days from the date of bite, regardless of vaccination status, as specified by local animal control ordinances. It is recommended that rabies vaccine not be administered during the observation period. Such animals shall be evaluated by a veterinarian at the first sign of illness during confinement. A veterinarian or animal control officer shall immediately report any illness in the animal to the local health department. If signs suggestive of rabies develop, a veterinarian or animal control officer shall direct that the animal be euthanized, its head removed, and the head shipped under refrigeration, not frozen, for examination of the brain by a laboratory approved by the Utah Department of Health.

(b) If the dog, cat, or ferret shows no signs of rabies or illness during the ten day period, the veterinarian or animal control officer shall direct that the unvaccinated animal be vaccinated against rabies at the owner's expense before release to the owner. If a veterinarian is not available, the animal may be released, but the owner shall have the animal vaccinated within 72 hours of release. If the dog, cat, or ferret was appropriately vaccinated against rabies before the incident, the

animal may be released from confinement after the 10-day observation period with no further restrictions.

(c) Any stray or unwanted dog, cat, or ferret that bites a person may be euthanized immediately by a veterinarian or animal control officer, if permitted by local ordinance, and the head submitted, as described in R386-702-6(2)(a), for rabies examination. If the brain is negative by fluorescent-antibody examination for rabies, one can assume that the saliva contained no virus, and the person bitten need not be treated.

(d) Wild animals include raccoons, skunks, coyotes, foxes, bats, the offspring of wild animals crossbred to domestic dogs and cats, and any carnivorous animal other than a domestic dog, cat, or ferret.

(e) Signs of rabies in wild animals cannot be interpreted reliably. If a wild animal bites or scratches a person, the person or attending medical personnel shall notify an animal control or law enforcement officer. A veterinarian, animal control officer or representative of the Division of Wildlife Resources shall kill the animal at once, without unnecessary damage to the head, and submit the brain, as described in R386-702-6(2)(a), for examination for evidence of rabies. If the brain is negative by fluorescent-antibody examination for rabies, one can assume that the saliva contained no virus, and the person bitten need not be treated.

(f) Rabbits, opossums, squirrels, chipmunks, rats, and mice are rarely infected and their bites rarely, if ever, call for rabies prophylaxis or testing. Unusual exposures to any animal should be reported to the local health department or the Bureau of Epidemiology, Utah Department of Health.

(g) When rare, valuable, captive wild animals maintained in zoological parks approved by the United States Department of Agriculture or research institutions, as defined by Section 26-26-1, bite or scratch a human, the Bureau of Epidemiology, Utah Department of Health shall be notified. The provisions of subsection R386-702-6(2)(e) may be waived by the Bureau of Epidemiology, Utah Department of Health if zoological park operators or research institution managers can demonstrate that the following rabies control measures are established:

(i) Employees who work with the animal have received preexposure rabies immunization.

(ii) The person bitten by the animal voluntarily agrees to accept postexposure rabies immunization provided by the zoological park or research facility.

(iii) The director of the zoological park or research facility shall direct that the biting animal be held in complete quarantine for a minimum of 180 days. Quarantine requires that the animal be prohibited from direct contact with other animals or humans.

(h) Any animal bitten or scratched by a wild, carnivorous animal or a bat that is not available for testing shall be regarded as having been exposed to rabies.

(i) For maximum protection of the public health, unvaccinated dogs, cats, and ferrets bitten or scratched by a confirmed or suspected rabid animal shall be euthanized immediately by a veterinarian or animal control officer. If the owner is unwilling to have the animal euthanized, the local health officer shall order that the animal be held in strict isolation in a municipal or county animal shelter or a veterinary medical facility approved by the local health department, at the owner's expense, for at least six months and vaccinated one month before being released. If any illness suggestive of rabies develops in the animal, the veterinarian or animal control officer shall immediately report the illness to the local health department and the veterinarian or animal control officer shall direct that the animal be euthanized and the head shall be handled as described in subsection R386-702-6(2)(a).

(j) Dogs, cats, and ferrets that are currently vaccinated and are bitten by rabid animals, shall be revaccinated immediately by a veterinarian and confined and observed by the animal's owner for 45 days. If any illness suggestive of rabies develops

in the animal, the owner shall report immediately to the local health department and the animal shall be euthanized by a veterinarian or animal control officer and the head shall be handled as described in subsection R386-702-6(2)(a).

(k) Livestock exposed to a rabid animal and currently vaccinated with a vaccine approved by the United States Department of Agriculture for that species shall be revaccinated immediately by a veterinarian and observed by the owner for 45 days. Unvaccinated livestock shall be slaughtered immediately. If the owner is unwilling to have the animal slaughtered, the animal shall be kept under close observation by the owner for six months.

(l) Unvaccinated animals other than dogs, cats, ferrets, and livestock bitten by a confirmed or suspected rabid animal shall be euthanized immediately by a veterinarian or animal control officer.

(3) Testing Fees at Utah Public Health Laboratory (UPHL).

(a) Animals being submitted to UPHL for rabies testing must follow criteria defined in The Compendium of Animal Rabies Prevention and Control to be eligible for testing without a fee. Testing of animals that fit this criteria will be eligible for a waived fee for testing. Testing of animals that do not meet this criteria will incur a testing fee as set forth by UPHL.

(b) The following situations will not incur a rabies testing fee if testing is ordered for them through UPHL:

(i) Any bat in an instance where a person or animal has had an exposure, or reasonable probability of exposure, including, but not limited to: known bat bites, exposure to bat saliva, a bat found in a room with a sleeping person or unattended child, or a bat found near a child or mentally impaired or intoxicated person.

(ii) Dogs, cats, or ferrets, regardless of rabies vaccination status, if signs suggestive of rabies are documented in them.

(iii) Wild mammals and hybrids that expose persons, pets, or livestock (e.g., skunks, foxes, coyotes, and raccoons) may be tested.

(iv) Livestock may be tested if signs suggestive of rabies are documented.

(v) UDOH Bureau of Epidemiology staff are available to discuss additional situations that may warrant testing at (801) 538-6191.

(c) The following situations will incur a \$95 testing fee if testing is ordered for them through UPHL:

(i) Any stray with unknown or undocumented vaccination history that exposes a person, if signs suggestive of rabies are not documented, or if the animal has not been confined and observed for at least 10 days.

(ii) Dogs, cats, and ferrets: currently vaccinated animals that expose a person, if signs suggestive of rabies are not documented, or animals have not been confined and observed for at least 10 days.

(iii) Regardless of rabies vaccination status, a healthy dog, cat, or ferret that has not exposed a person.

(iv) Small rodents (e.g., rats, mice, squirrels, chipmunks, voles, or moles) and lagomorphs (rabbits and hares).

(v) Incomplete paperwork accompanying the sample will also result in a fee for testing; a thorough description of the situation must be included with each sample submission.

(vi) UDOH Bureau of Epidemiology staff are available to discuss additional situations that may not warrant testing at (801) 538-6191.

(d) If the submitting party feels they are charged inappropriately for rabies testing, they may send a letter describing the situation and requesting a waiver for fees to: Utah Department of Health, Bureau of Epidemiology, P.O. Box 142104, Salt Lake City, UT 84114, attention: Zoonotic Diseases Epidemiologist. Information may be submitted electronically via email to: epi@utah.gov, with a note in the subject line

"Attention: Zoonotic Diseases Epidemiologist".

(i) The submitting party has 30 days from receipt of the testing fee invoice to file an appeal. The letter must include copies of the original paperwork that was submitted, and a copy of the invoice received, for a waiver to be considered.

(ii) UDOH and UPHL have 30 days to review information after receipt of an appeal request to make an official decision and notify the submitter.

(iii) UDOH Bureau of Epidemiology staff are available to discuss questions about testing fees and the appeal process at (801) 538-6191.

(4) Measures for Standardized Rabies Control Practices.

(a) Humans requiring either pre- or post-exposure rabies prophylaxis shall be treated in accordance with the recommendations of the U.S. Public Health Service Immunization Practices Advisory Committee, as adopted and incorporated by reference in R386-702-12(2). A copy of the recommendations shall be made available to licensed medical personnel, upon request to the Bureau of Epidemiology, Utah Department of Health.

(b) A physician or other health care provider that administers rabies vaccine shall immediately report all serious systemic neuroparalytic or anaphylactic reactions to rabies vaccine to the Bureau of Epidemiology, Utah Department of Health, using the process described in R386-702-4.

(c) The Compendium of Animal Rabies Prevention and Control, as adopted and incorporated by reference in R386-702-12(3), is the reference document for animal vaccine use.

(d) A county, city, town, or other political subdivision that requires licensure of animals shall also require rabies vaccination as a prerequisite to obtaining a license.

(e) Animal rabies vaccinations are valid only if performed by or under the direction of a licensed veterinarian in accordance with the Compendium of Animal Rabies Prevention and Control.

(f) All agencies and veterinarians administering vaccine shall document each vaccination on the National Association of State Public Health Veterinarians (NASPHV) form number 51, Rabies Vaccination Certificate, which can be obtained from vaccine manufacturers. The agency or veterinarian shall provide a copy of the report to the animal's owner. Computer-generated forms containing the same information are also acceptable.

(g) Animal rabies vaccines may be sold or otherwise provided only to licensed veterinarians or veterinary biologic supply firms. Animal rabies vaccine may be purchased by the Utah Department of Health and the Utah Department of Agriculture.

(5) Measures to Prevent or Control Rabies Outbreaks.

(a) The most important single factor in preventing human rabies is the maintenance of high levels of immunity in the pet dog, cat, and ferret populations through vaccination.

(i) All dogs, cats, and ferrets in Utah should be immunized against rabies by a licensed veterinarian; and

(ii) Local governments should establish effective programs to ensure vaccination of all dogs, cats, and ferrets and to remove strays and unwanted animals.

(b) If the Utah Department of Health determines that a rabies outbreak is present in an area of the state, the Utah Department of Health may require that:

(i) all dogs, cats, and ferrets in that area and adjacent areas be vaccinated or revaccinated against rabies as appropriate for each animal's age;

(ii) any such animal be kept under the control of its owner at all times until the Utah Department of Health declares the outbreak to be resolved;

(iii) an owner who does not have an animal vaccinated or revaccinated surrender the animal for confinement and possible destruction; and

(iv) such animals found at-large be confined and possibly

destroyed.

R386-702-7. Special Measures for Control of Typhoid.

(1) Because typhoid control measures depend largely on sanitary precautions and other health measures designed to protect the public, the local health department shall investigate each case of typhoid and strictly manage the infected individual according to the following outline:

(2) Cases: Standard precautions are required during hospitalization. Use contact precautions for diapered or incontinent patients for the duration of illness. Hospital care is desirable during acute illness. Release of the patient from supervision by the local health department shall be based on three or more negative cultures of feces (and of urine in patients with schistosomiasis) taken at least 24 hours apart. Cultures must have been taken at least 48 hours after antibiotic therapy has ended and not earlier than one month after onset of illness as specified in R386-702-7(6). If any of these cultures is positive, repeat cultures at intervals of one month during the 12-month period following onset until at least three consecutive negative cultures are obtained as specified in R386-702-7(6). The patient shall be restricted from food handling, child care, and from providing patient care during the period of supervision by the local health department.

(3) Contacts: Administration of typhoid vaccine is recommended for all household members of known typhoid carriers. Household and close contacts of a carrier shall be restricted from food handling, child care, and patient care until two consecutive negative stool specimens, taken at least 24 hours apart, are submitted, or when approval is granted by the local health officer according to local jurisdiction.

(4) Carriers: If a laboratory or physician identifies a carrier of typhoid, the attending physician shall immediately report the details of the case by telephone to the local health department or the Bureau of Epidemiology, Utah Department of Health using the process described in R386-702-4. Each infected individual shall submit to the supervision of the local health department. Carriers are prohibited from food handling, child care, and patient care until released in accordance with R386-702-7(4)(a) or R386-702-7(4)(b). All reports and orders of supervision shall be kept confidential and may be released only as allowed by Subsection 26-6-27(2)(c).

(a) Convalescent Carriers: Any person who harbors typhoid bacilli for three but less than 12 months after onset is defined as a convalescent carrier. Release from occupational and food handling restrictions may be granted at any time from three to 12 months after onset, as specified in R386-702-7(6).

(b) Chronic Carriers: Any person who continues to excrete typhoid bacilli for more than 12 months after onset of typhoid is a chronic carrier. Any person who gives no history of having had typhoid or who had the disease more than one year previously, and whose feces or urine are found to contain typhoid bacilli is also a chronic carrier.

(c) Other Carriers: If typhoid bacilli are isolated from surgically removed tissues, organs, including the gallbladder or kidney, or from draining lesions such as osteomyelitis, the attending physician shall report the case to the local health department or the Bureau of Epidemiology, Utah Department of Health. If the person continues to excrete typhoid bacilli for more than 12 months, he is a chronic carrier and may be released after satisfying the criteria for chronic carriers in R386-702-7(6).

(5) Carrier Restrictions and Supervision: The local health department shall report all typhoid carriers to the Bureau of Epidemiology, and shall:

- (a) Require the necessary laboratory tests for release;
- (b) Issue written instructions to the carrier;
- (c) Supervise the carrier.
- (6) Requirements for Release of Convalescent and Chronic

Carriers: The local health officer or his representative may release a convalescent or chronic carrier from occupational and food handling restrictions only if at least one of the following conditions is satisfied:

(a) For carriers without schistosomiasis, three consecutive negative cultures obtained from fecal specimens authenticated by the attending physician, hospital personnel, laboratory personnel, or local health department staff taken at least one month apart and at least 48 hours after antibiotic therapy has stopped;

(b) for carriers with schistosomiasis, three consecutive negative cultures obtained from both fecal and urine specimens authenticated by the attending physician, hospital personnel, laboratory personnel, or local health department staff taken at least one month apart and at least 48 hours after antibiotic therapy has stopped;

(c) the local health officer or his representative determine that additional treatment such as cholecystectomy or nephrectomy has terminated the carrier state; or

(d) the local health officer or his representative determines the carrier no longer presents a risk to public health according to the evaluation of other factors.

R386-702-8. Special Measures for the Control of Ophthalmia Neonatorum.

Every physician or midwife practicing obstetrics or midwifery shall, within three hours of the birth of a child, instill or cause to be instilled in each eye of such newborn one percent silver nitrate solution contained in wax ampules, or tetracycline ophthalmic preparations or erythromycin ophthalmic preparations, as these are the only antibiotics of currently proven efficacy in preventing development of ophthalmia neonatorum. The value of irrigation of the eyes with normal saline or distilled water is unknown and not recommended.

R386-702-9. Special Measures for the Control of HIV/AIDS.

(1) Authority for this section is established by Title 26, Chapter 6, Sections 3 and 3.5 of the Utah Communicable Disease Control Act. This section establishes requirements for:

(a) General reporting of screening, diagnostic, and treatment test results related to Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS).

(b) Partner identification and notification.

(2) Reporting of HIV and AIDS:

(a) A health care provider who administers or causes to have administered any of the following tests shall report all positive and indeterminate results (preliminary and confirmatory) to the Department or the local health department:

(i) Presence of antibodies to HIV;

(ii) Presence of HIV antigen;

(iii) Isolation of HIV;

(iv) Demonstration of HIV pro-viral DNA;

(v) Demonstration of HIV specific nucleic acids;

(vi) HIV viral load determination;

(vii) Any other test or condition indicative of HIV infection; and

(viii) CD4+ T-Lymphocyte tests, regardless of known HIV status.

(b) A laboratory that analyzes samples for any of the tests listed in R386-702-9(2)(a) shall report all results to the Department or the local health department.

(i) Specific electronic reporting requirements are described in R386-702-4(2)(b).

(c) Reports shall include, as available:

(i) First and last name of the patient;

(ii) Patient date of birth;

(iii) Sex;

(iv) Race;

(v) Occupation;

- (vi) Patient phone number;
- (vii) Patient hospitalization status;
- (viii) Name and telephone number of the reporting facility;
- (ix) Name and telephone number of the testing laboratory;
- (x) Patient home and work address;
- (xi) Name, address, and phone number of the requesting health care provider;
- (xii) Specimen source;
- (xiii) Testing results;
- (xiv) Laboratory's name for, or description of, the test;
- (xv) Test reference range; and
- (xvi) Test status (e.g. preliminary, final, amended and/or corrected).

(d) Reports may be made via ELR, or in writing, by telephone, or by other electronic means acceptable to the Department as described in R386-702-4(2).

(3) Partner identification and notification: if an individual is tested and found to have an HIV infection, the Department and/or local health department shall provide partner services, linkage-to-care activities, and promote retention to HIV care.

(a) Definitions:

(i) "Partner" is defined as any individual, including a spouse, who has shared needles, syringes, or drug paraphernalia or who has had sexual contact with an HIV infected individual.

(ii) "Spouse" is defined as any individual who is the marriage partner of that person at any time within the ten-year period prior to the diagnosis of HIV infection.

(iii) "Linkage to care" is defined by a reported CD4+ T-Lymphocyte test and/or HIV viral load determination within three months of HIV positive diagnosis.

(iv) "Retention to care" is defined by a reported CD4+ T-Lymphocyte test or HIV viral load determination twice within a 12-month period and at least three months apart.

(b) Partner services include:

(i) Confidential partner notification within 30 days of receiving a positive HIV result;

(ii) Prevention counseling;

(iii) Testing for HIV;

(iv) Providing recommendations for testing for other sexually transmitted diseases;

(v) Providing recommendations for hepatitis screening and vaccination;

(iv) Treatment or linkage to medical care within three months of HIV diagnosis; and

(v) Linkage or referral to other prevention services and support.

(4) A university or hospital that conducts research studies exempt from reporting AIDS and HIV infection under Section 26-6-3.5 shall submit the following to the Department:

(a) A summary of the research protocol including funding sources and justification for requiring anonymity;

(b) Written approval of the Utah Department of Health institutional review board; and

(c) A final report indicating the number of HIV positive and HIV negative individuals enrolled in the study.

R386-702-10. Special Measures to Prevent Perinatal and Person-to-Person Transmission of Hepatitis B Infection.

(1) A licensed healthcare provider who provides prenatal care shall routinely test each pregnant woman for hepatitis B surface antigen (HBsAg) at an early prenatal care visit. The provisions of this section do not apply if the pregnant woman, after being informed of the possible consequences, objects to the test on the basis of religious or personal beliefs.

(2) The licensed healthcare provider who provides prenatal care should repeat the HBsAg test during late pregnancy for those women who tested negative for HBsAg during early pregnancy, but who are at high risk based on:

(a) evidence of clinical hepatitis during pregnancy;

(b) injection drug use;

(c) occurrence during pregnancy or a history of a sexually transmitted disease;

(d) occurrence of hepatitis B in a household or close family contact; or

(e) the judgment of the healthcare provider.

(3) In addition to other reporting required by this rule, each positive HBsAg result detected in a pregnant woman shall be reported to the local health department or the Utah Department of Health, as specified in Section 26-6-6. That report shall indicate that the woman was pregnant at time of testing if that information is available to the reporting entity.

(4) A licensed healthcare provider who provides prenatal care shall document a woman's HBsAg test results, or the basis of the objection to the test, in the medical record for that patient.

(5) Every hospital and birthing facility shall develop a policy to assure that:

(a) when a pregnant woman is admitted for delivery, or for monitoring of pregnancy status, the result from a test for HBsAg performed on that woman during that pregnancy is available for review and documented in the hospital record;

(b) when a pregnant woman is admitted for delivery, if the woman's test result is not available to the hospital or birthing facility, the mother is tested for HBsAg as soon as possible, but before discharge from the hospital or birthing facility;

(c) if a pregnant woman who has not had prenatal care during that pregnancy is admitted for monitoring of pregnancy status only, and if the woman's test result is not available to the hospital or birthing facility, the mother is tested for HBsAg status before discharge from the hospital or birthing facility;

(d) positive HBsAg results identified by testing performed or documented during the hospital stay are reported as specified in this rule;

(e) infants born to HBsAg positive mothers receive hepatitis B immune globulin (HBIG) and hepatitis B vaccine, administered at separate injection sites, within 12 hours of birth;

(f) infants born to mothers whose HBsAg status is unknown receive hepatitis B vaccine within 12 hours of birth, and if the infant is born preterm with birth weight less than 2,000 grams, that infant also receives HBIG within 12 hours; and

(g) if at the time of birth the mother's HBsAg status is unknown and the HBsAg test result is later determined to be positive, that infant receives HBIG as soon as possible but within 7 days of birth.

(h) hepatitis B immune globulin (HBIG) administration and birth dose hepatitis B vaccine status of infants born to mothers who are HBsAg-positive, or whose status is unknown, are reported within 24 hours of delivery to the local health department and Utah Department of Health Immunization Program at (801) 538-9450.

(6) Local health departments shall perform the following activities or assure that they are performed:

(a) All females between the ages of 12 and 50 years at the time an HBsAg positive test result is reported will be screened for pregnancy status within one week of receipt of that lab result.

(b) Infants born to HBsAg positive mothers complete the hepatitis B vaccine series as specified in in the most current version of "The Red Book" as cited in R386-702-13 (4).

(c) Children born to HBsAg positive mothers are tested for HBsAg and antibody against hepatitis B surface antigen (anti-HBs) at 9 to 18 months of age (testing is done at least one month after the final dose of hepatitis B vaccine series is administered, and no earlier than 9 months of age) to monitor the success of therapy and identify cases of perinatal hepatitis B infection.

(i) Children who test negative for HBsAg and do not demonstrate serological evidence of immunity against hepatitis

B when tested as described in (c) receive additional vaccine doses and are retested as specified in the most current version of "The Red Book" as cited in R386-702-13 (4).

(d) HBsAg positive mothers are advised regarding how to reduce their risk of transmitting hepatitis B to others.

(e) Household members and sex partners of HBsAg positive mothers are evaluated to determine susceptibility to hepatitis B infection and if determined to be susceptible, are offered or advised to obtain vaccination against hepatitis B.

(f) All identified acute hepatitis B cases shall be investigated by the local health department, and identified household and sexual contacts shall be advised to obtain vaccination against hepatitis B.

(7) The provisions of subsections (5) and (6) do not apply if the pregnant woman or the child's guardian, after being informed of the possible consequences, objects to any of the required procedures on the basis of religious or moral beliefs. The hospital or birthing facility shall document the basis of the objection.

(8) Prevention of transmission by individuals with chronic hepatitis B infection.

(i) HBsAg positive, and total antibody against hepatitis B core antigen (anti-HBc) positive (if done) and IgM anti-HBc negative; or

(a) An individual with chronic hepatitis B infection should be advised regarding how to reduce the risk that the individual will transmit hepatitis B to others.

(b) Household members and sex partners of individuals with chronic hepatitis B infection should be evaluated to determine susceptibility to hepatitis B infection, and if determined to be susceptible, should be offered or advised to obtain vaccination against Hepatitis B.

R386-702-11. Public Health Emergency.

(1) Declaration of Emergency: With the Governor's and Executive Director's or in the absence of the Executive Director, his designee's, concurrence, the Department or a local health department may declare a public health emergency by issuing an order mandating reporting emergency illnesses or health conditions specified in sections R386-702-3 for a reasonable time.

(2) For purposes of an order issued under this section and for the duration of the public health emergency, the following definitions apply.

(a) "emergency center" means:

(i) a health care facility licensed under the provisions of Title 26, Chapter 21, Utah Code, that operates an emergency department; or

(ii) a clinic that provides emergency or urgent health care to an average of 20 or more persons daily.

(b) "encounter" means an instance of an individual presenting at the emergency center who satisfies the criteria in section R386-702-3(2); and

(c) "diagnostic information" means an emergency center's records of individuals who present for emergency or urgent treatment, including the reason for the visit, chief complaint, results of diagnostic tests, presenting diagnosis, and final diagnosis, including diagnostic codes.

(3) Reporting Encounters: The Department shall designate the fewest number of emergency centers as is practicable to obtain the necessary data to respond to the emergency.

(a) Designated emergency centers shall report using the process described in R386-702-4.

(b) An emergency center designated by the Department shall report the encounters to the Department by:

(i) allowing Department representatives or agents, including local health department representatives, to review its diagnostic information to identify encounters during the previous day; or

(ii) reviewing its diagnostic information on encounters during the previous day and reporting all encounters by 9:00 a.m. the following day, or

(iii) identifying encounters and submitting that information electronically to the Department, using a computerized analysis method, and reporting mechanism and schedule approved by the Department; or

(iv) by other arrangement approved by the Department.

(4) For purposes of epidemiological and statistical analysis, the emergency center shall report on encounters during the public health emergency that do not meet the definition for a reportable emergency illness or health condition. The report shall be made using the process described in R386-702-4 and shall include the following information for each such encounter:

(a) facility name;

(b) date of visit;

(c) time of visit;

(d) patient's age;

(e) patient's sex;

(f) patient's zip code for patient's residence.

(5) If either the Department or a local health department collects identifying health information on an individual who is the subject of a report made mandatory under this section, it shall destroy that identifying information upon the earlier of its determination that the information is no longer necessary to carry out an investigation under this section or 180 days after the information was collected. However, the Department and local health departments shall retain identifiable information gathered under other sections of this rule or other legal authority.

(6) Reporting on encounters during the public health emergency does not relieve a reporting entity of its responsibility to report under other sections of this rule or other legal authority.

R386-702-12. Penalties.

Any person who violates any provision of R386-702 may be assessed a penalty as provided in Section 26-23-6.

R386-702-13. Official References.

All treatment and management of individuals and animals who have or are suspected of having a communicable or infectious disease that must be reported pursuant to this rule shall comply with the following documents, which are adopted and incorporated by reference:

(1) American Public Health Association. "Control of Communicable Diseases Manual". 20th ed., Heymann, David L., editor, 2015.

(2) Centers for Disease Control and Prevention. "Human Rabies Prevention---United States, 2008: Recommendations of the Advisory Committee on Immunization Practices." *Morbidity and Mortality Weekly Report*. 57 (RR03) (2008):1-26, 28.

(3) National Association of State Public Health Veterinarians Committee. "Compendium of Animal Rabies Prevention and Control, 2011." *Nasphv.org*. National Association of State Public Health Veterinarians, 31 May 2011. Web. <http://nasphv.org/Documents/RabiesCompendium.pdf>

(4) American Academy of Pediatrics. "Red Book: 2012 Report of the Committee on Infectious Diseases" 30th Edition. Elk Grove Village, IL, American Academy of Pediatrics; 2015.

(5) National Association of State Public Health Veterinarians Animal Contact Compendium Committee 2013. "Compendium of Measures to Prevent Disease Associated with Animals in Public Settings, 2013." *Journal of the American Veterinary Medicine Association* 243 (2013): 1270-288.

KEY: communicable diseases, quarantines, rabies, rules and procedures

February 11, 2016

26-1-30

Notice of Continuation April 15, 2016

26-6-3
26-23b

R392. Health, Disease Control and Prevention, Environmental Services.**R392-110. Home-based Child Care Food Service.****R392-110-1. Authority and Purpose.**

This rule establishes food service inspection standards for certified or licensed child care providers that provide care for 16 or fewer children. It is authorized by Sections 26-15-2 and 26-39-104.

R392-110-2. Applicability.

This rule applies to food service provided in certified or licensed child care facilities, including residences, that provide care for 16 or fewer children, notwithstanding the provisions of R392-100. R392-100 governs food service provided in facilities that care for more than 16 children.

R392-110-3. Inspection Request, Report.

After request and payment of the fee established by the local health department, a local health department shall inspect a child care provider's food service based on the standards established in this rule and using an inspection form approved by the Department. Upon satisfactory inspection, the local health department shall issue a report to the child care provider stating that the food service provided by the child care provider poses no serious sanitation or health hazard to children.

R392-110-4. Standards.

(1) Food is obtained from sources that comply with law and are approved as outlined in R392-100 3-2.

(2) Food in a hermetically sealed container is obtained from a food processing plant that is regulated by the food regulatory agency that has jurisdiction over the plant.

(3) Food is protected from contamination by storing the food in a clean, dry location where it is not exposed to splash, dust, or other contamination and stored above the floor.

(4) Food is not stored in toilet rooms or mechanical rooms, under sewer lines, under leaking water lines or under any source of contamination.

(5) Food brought in by parents to serve to other children in the facility is from approved sources that comply with law and are approved as outlined in R392-100 3-2

(6) Food brought in by a parent or guardian for specific use of that person's child is labeled with the name of the child.

(7) Bottled or canned baby food, upon opening, is labeled on the outside of the container with the date and time of opening.

(8) Canned or bottled opened baby food containers, except for dry products, are refrigerated and kept at 41 degrees F or below.

(9) Canned or bottled baby food, except for dry products, is discarded if not used within 24 hours of opening.

(10) Infant formula or breast milk is discarded after feeding or within two hours of initiating a feeding.

(11) Refrigerators used to store food for children are maintained and cleaned to prevent contamination of stored food.

(12) Food products stored inside refrigerator are stored at 41 degrees F or below as outlined by R392-100 3-5.

(13) A calibrated thermometer is stored in the refrigerator to verify the temperature of food products.

(14) Food prepared at the day care facility meets the critical cooking, hot holding, cold holding, and cooling temperatures as outlined in R392-100, 3-4 and 3-5.

(15) Each caregiver who prepares or serves food is trained in food safety and has a copy of a current food handler permit on file at the facility.

(16) Food is served on clean plates, single service plates, or a clean and sanitized high chair tray.

(17) If napkins are used at meals or snacks, then they must be single service.

(18) Clean cups or single service cups are provided at each beverage service.

(19) Before each use, reusable food holders, utensils, and preparation surfaces are washed with hot water and detergent solutions, rinsed with clean water, and sanitized as outlined in R392-100 4-501.114.

(20) Food employees clean their hands and exposed portions of their arms:

(a) immediately before engaging in food preparation including working with exposed food, clean equipment and utensils, and unwrapped single service and single use articles;

(b) after touching bare human body parts other than clean hands and clean exposed portions of arms;

(c) after using the toilet room;

(d) after caring for or handling any animal, including service animals;

(e) when switching between working with raw food and ready to eat food; and

(f) as often as necessary to remove soil and contamination and to prevent cross contamination when changing tasks.

(21) Hand washing facilities are located to allow convenient use by employees in food preparation, food dispensing, and ware washing areas; and in or immediately adjacent to toilet rooms.

(22) When preparing food, employees wear hair restraints, such as hats, hair coverings or nets, beard restraints, and clothing that covers body hair, that effectively keep their hair from contacting exposed food; clean equipment, utensils, and linens, and unwrapped single service and single use articles.

(23) Food employees wear clean outer clothing to prevent contamination of food, equipment, utensils, linens, and single service and single use articles.

(24) Poisonous or toxic chemicals are identified.

(25) Procedures are in place to ensure that poisonous or toxic chemicals are safely stored to prevent access by children

(26) Poisonous or toxic materials are stored so they can not contaminate food, equipment, utensils, linens, and single service and single use articles.

(27) Only those poisonous or toxic materials that are required for the operation and maintenance of food storage, preparation, and service areas such as for the cleaning and sanitizing of equipment and utensils and the control of insects and rodents are in the food storage, preparation, and service areas.

(28) Menus for the current week are posted in plain sight and accessible for public review.

**KEY: child care providers, food service
September 18, 2006**

Notice of Continuation April 26, 2016

**26-15-2
26-39-104**

R512. Human Services, Child and Family Services.**R512-10. Youth Mentor Program.****R512-10-1. Purpose and Authority.**

(1) The purpose of this rule is to establish criteria for a Youth Mentor Program.

(2) This rule is authorized by Section 62A-4a-102.

R512-10-2. Definition.

(1) Level One: The Youth Mentor Program is an advocacy service for youth and families which provides support and socialization activities, and assists in building self-esteem of youth who are at risk of or have been neglected or abused or who are ungovernable.

(2) Level Two: In areas of the state where parent education programs do not exist, the youth mentor funds may pay for parent education services. The parent education services would be used for the purpose of working with a parent(s) who is lacking in parenting, socialization, and homemaking skills.

(3) Level Three: This level of the Youth Mentor Program is characterized by providing intensive services to youth who may be seriously out of control, may have serious behavioral or emotional problems, may be substance abusers, may be preparing for independent living, or may require stringent costly out-of-home placements if less restrictive interventions are not provided. Intensive youth mentors provide one-on-one intensive supervision that may include assistance to the out-of-home provider in monitoring of behavior, basic living skills training, crisis intervention, as well as linkage to educational, vocational, employment, and recreational services.

R512-10-3. Conditions for Approval.

(1) The youth mentor shall meet the following standards:

(a) The youth mentor shall submit fingerprints to be cleared through the Bureau of Criminal Investigation (BCI) as authorized by Section 62A-4a-202.4. This check must show that the applicant has not been convicted of a felony or certain misdemeanors, which may have an impact in working with children. The Child and Family Services database (USSDS or SAFE) shall be checked for any occurrences of child abuse. If the applicant has a substantiated child abuse report, this information, along with other information, will be taken into consideration during the application process.

(b) The youth mentor will receive a copy of the Department of Human Services "Code of Conduct" and will act accordingly. A signed copy of the Statement of Understanding will be included in the youth mentor's file.

(c) The youth mentor will sign a Motor Vehicle Insurance Certification form in which the youth mentor will certify that no-fault property damage and liability coverage insurance will be maintained on any automobile used in the program.

(d) Compliance with these standards will be monitored by Child and Family Services' regional staff and/or the youth mentor coordinator, based on interviews, collateral contacts, and other appropriate documentation.

R512-10-4. Characteristics and Requirements of Youth Mentor.

(a) The youth mentor shall not discriminate against the youth because of race, color, national origin, sex, religion, or handicap. The youth mentor shall respect the religious and cultural practices of the youth.

(b) The youth mentor shall have the physical health necessary to perform the responsibilities of the position.

(c) The youth mentor shall have no unresolved emotional or mental health needs which impede the youth mentor in performing the responsibilities of the position.

(d) The youth mentor shall be 21 years of age or older.

(e) While working with youth, the youth mentor shall demonstrate maturity, flexibility, the ability to modify

expectations and attitudes, and the ability to accept and respond to the needs of youth.

(f) The youth mentor shall respect the relationship the youth has with the natural parents and Child and Family Services, and shall encourage those relationships.

(g) The youth mentor shall have experience fostering the development of children or shall have the personal characteristics and temperament suited to working with children.

(h) The youth mentor shall not be dependent on the youth mentor payments as the primary source of household income.

(i) A Child and Family Services employee shall not be approved as a youth mentor.

(j) The youth mentor shall not be on probation, parole, or under indictment for a criminal offense, and shall have no history of crimes involving youth.

(k) The youth mentor shall work cooperatively with Child and Family Services, the Juvenile Court, the Guardian ad Litem, the Attorney General, and law enforcement officials as authorized by the supervising caseworker.

(l) The youth mentor shall understand and abide by the requirements that information must be kept confidential.

(m) The youth mentor shall notify the caseworker and guardian of concerns.

(n) The youth mentor shall be trained to provide for the needs of the youth they work with. The training shall be approved by Child and Family Services and may be provided by the youth mentor coordinator or by other educational or social agencies in the community.

(o) The youth mentor shall not use any type of corporal punishment in working with youth. Infliction of bodily pain, discomfort, or degrading/humiliating punishment shall be prohibited.

R512-10-5. Revocation of the Youth Mentor Agreement.

(1) Child and Family Services may revoke certification upon any of the following grounds:

(a) Violation of standards, agreement conditions, or the Department of Human Services Code of Conduct.

(b) Conduct in the provision of service that is or may be harmful to the health or safety of persons receiving the service.

(2) If the above conditions exist, the immediate suspension or revocation of the Youth Mentor Agreement shall be ordered. Written notice shall be sent to the youth mentor and shall contain a statement of the basis for the order. The letter must also inform the youth mentor of the right and procedure to request a reconsideration of the action.

KEY: child welfare, youth advocate

February 9, 2010

Notice of Continuation April 14, 2016

62A-4a-102

62A-4a-106

R512. Human Services, Child and Family Services.**R512-42. Adoption by Relatives.****R512-42-1. Purpose and Authority.**

(1) The purpose of this rule is to specify requirements for relatives to adopt a child in the custody of Child and Family Services.

(2) This rule is authorized by Sections 62A-4a-102, 78A-6-307, 78B-6-128, and 78B-6-133.

R512-42-2. Definitions.

(1) "Child and Family Services" means the Division of Child and Family Services.

(2) "Relative" is defined in Section 78A-6-307.

R512-42-3. Adoption by Relatives.

(1) A relative who has a relationship with a child in state's custody who may become available for adoption may apply to adopt a particular child.

(2) The application and adoptive evaluation (commonly called a home study) will be handled in accordance with the Child and Family Services Adoption Practice Guidelines, and in accordance with R512-41 and Sections 78B-6-128 and 78B-6-133, based upon the best interest of the child.

(a) Any preferential consideration of a relative defined in Section 78A-6-306 for the initial placement of a child in state's custody expires in 120 days of the shelter hearing.

(b) When a relative who has a significant and substantial relationship with the child as set forth in Section 78B-6-133, and who was not notified by Child and Family Services within 120 days and comes forward when a child in state's custody has a permanency goal of adoption, the long-term needs of the child to have connection with family will be a priority consideration as long as the relative has the ability to meet the long-term physical, emotional, cognitive, and special needs of the child.

(3) When the 120-day time period for preferential consideration for a relative of a child in custody expires, the court shall consider an adoptive petition based on the best interest of the child and shall include:

(a) Where the child is placed.

(b) Where the child has resided for six months.

(c) Relatives who have filed a written statement with the court within 120 days of the date of the shelter hearing to:

(i) request immediate placement of the child; and

(ii) express the petitioner's intention of adopting the child.

(d) Who is a relative:

(i) with whom the child has a significant and substantial relationship; and

(ii) who was unaware, within the first 120 days after the day on which the shelter hearing is held, of the child's removal from the child's parent; or

(e) If the child:

(i) has been in the current placement for less than 180 days before the day on which the petitioner files the petition for adoption; and

(ii) is placed with, or is in the custody or guardianship of, an individual who previously informed Child and Family Services or the court that the individual is unwilling or unable to adopt the child.

KEY: adoption**April 7, 2016****Notice of Continuation March 5, 2012****62A-4a-102****78A-6-307****78B-6-102****78B-6-117****78B-6-128****78B-6-133****78B-6-137**

R512. Human Services, Child and Family Services.

R512-44. Choose Life Adoption Support Restricted Account.

R512-44-1. Purpose and Authority.

(1) The purpose of this rule is to specify the requirements for carrying out the purposes of the Choose Life Adoption Support Restricted Account as outlined in Section 62A-4a-608, with the funding specified in Section 41-1a-418.

(2) This rule is authorized by Section 62A-4a-102.

R512-44-2. Definitions.

(1) For the purposes of this Rule:

(a) "Administrator" means the employee of Child and Family Services appointed by the Director to administer the Choose Life Adoption Support.

(b) "Child and Family Services" means the Division of Child and Family Services.

(c) "Director" means the Director of Child and Family Services.

(d) "RFP" means Request for Proposal.

R512-44-3. Scope.

(1) Funds from the Choose Life Adoption Support Restricted Account shall be used for charitable organizations that support, promote, and provide education about adoption. This may occur by producing and distributing educational and promotional materials on adoption, conducting educational courses on adoption, and providing other programs that support adoption as specified in Section 62A-4a-608.

R512-44-4. Responsibilities of the Director.

(1) In addition to the responsibilities defined in Section 62A-4a-608, the Director shall:

(a) Designate a staff member to serve as the Administrator of the Choose Life Adoption Support Restricted Account.

(2) Approve policies of the Choose Life Adoption Support Restricted Account.

R512-44-5. Funding Limitations and Requirements.

(1) Child and Family Services shall distribute the funds in the Choose Life Adoption Support Restricted Account to one or more charitable organizations that:

(a) Qualify as being tax exempt under Section 501(c)(3) of the Internal Revenue Code;

(b) As part of their primary mission, include the support, promotion, and education of adoption programs; and

(c) Are licensed or registered to do business within the state in accordance with Utah state law.

(2) Funding for individual projects shall be based on yearly revenues available in the restricted account. If unobligated account revenues for a given year are less than \$50,000, Child and Family Services may forego the RFP process for that year.

(3) Each program or project funded through the Choose Life Adoption Support Restricted Account shall provide a dollar-for-dollar match from private, non-government sources.

(a) In-kind contributions may be used as part of the match requirement. No more than 50 percent of the match requirement may be in-kind.

(b) Items that may be used as in-kind match are contributed services of support personnel, office space, furniture and equipment, utility costs, donated printing, vehicles, and contributed services of professional personnel including physicians, nurses, social workers, psychologists, educators, public accountants, and lawyers who are performing services for which they would normally be paid. The source of original funding for this in-kind match shall not be state or federal monies.

(4) Of the total monies available for allocation in the Choose Life Adoption Support Restricted Account, awards shall

be granted according to the allocation plan approved by the Director.

R512-44-6. Proposal Requirements.

(1) A RFP shall be developed by the Administrator based upon the approved allocation plan and adoption support priorities, and in accordance with State Purchasing Guidelines. The RFP shall specify the purposes and eligibility requirements for projects or programs to be funded through the Choose Life Adoption Support Restricted Account. The proposal requirements may vary from year to year.

(2) The RFP shall be disseminated through the online State Purchasing Bid Program. Project or program proposals shall be submitted as specified in the RFP.

R512-44-7. Procedures in Selecting Programs or Projects to be Supported by the Choose Life Adoption Support Restricted Account.

(1) Proposals received by Child and Family Services in response to the RFP shall be reviewed according to the criteria specified in the RFP, consistent with Section 62A-4a-608.

(2) The Administrator or Child and Family Services contract specialists shall negotiate contracts with successful offerors, based on State Purchasing Guidelines.

R512-44-8. Research.

(1) Choose Life Adoption Support Restricted Account funds may be used for research programs consistent with Section 62A-4a-608 at funding levels deemed appropriate. Basic or applied research programs or projects that provide empirical data that help support adoption or inform adoption education may be funded.

R512-44-9. Evaluation.

(1) Each program or project funded through the Choose Life Adoption Support Restricted Account shall be evaluated by Child and Family Services at least once each year to determine if the purposes and goals of the project have been met.

KEY: adoption, Choose Life Adoption Support

October 26, 2011	41-1a-418
Notice of Continuation April 14, 2016	41-1a-419
	41-1a-422
	62A-4a-102
	62A-4a-311
	62A-4a-608
	63J-1-504
	63J-1-602.4

R525. Human Services, Substance Abuse and Mental Health, State Hospital.**R525-8. Forensic Mental Health Facility.****R525-8-1. Authority and Purpose.**

(1) This rule is adopted under the authority of Section 62A-15-105.

(2) The purpose of this rule is to explain the allocation of beds for the Forensic Mental Health Facility at the Utah State Hospital.

R525-8-2. Forensic Mental Health Facility.

(1) Pursuant to the requirements of Section 62A-15-902(2)(c), the forensic mental health facility allocates beds to serve the following categories:

(a) prison inmates displaying mental illness, as defined in Section 62A-15-602, necessitating treatment in a secure mental health facility;

(b) criminally adjudicated persons found guilty and mentally ill or undergoing evaluation for mental illness under Title 77, Chapter 16a;

(c) criminally adjudicated persons found guilty and mentally ill or undergoing evaluation for mental illness under Title 77, Chapter 16a, who are also mentally retarded;

(d) persons found by a court to be incompetent to proceed in accordance with Title 77, Chapter 15, or not guilty by reason of insanity under Title 77, Chapter 14; and

(e) persons who are civilly committed to the custody of a local mental health authority in accordance with Title 62A, Chapter 15, Part 6, and who may not be properly supervised by the Utah State Hospital because of a lack of necessary security, as determined by the superintendent or his designee.

(2) Additionally, the beds serve the following categories:

(a) persons undergoing an evaluation to determine competency to proceed under Title 77, Chapter 15; and

(b) persons committed to the state hospital as a condition of probation under Subsection 77-18-1(13).

R525-8-3. Bed Allocation.

Beds are allocated based on current psychiatric need and legal status. Highest priority shall be given to those cases which are specifically required to be admitted to the Utah State Hospital by Utah law.

R525-8-4. No Admission Because of Capacity.

When capacity in the forensic mental health facility has been met, the hospital shall not admit any persons to the forensic mental health facility until a bed becomes available. In such an event the hospital will work cooperatively with the court to find a resolution.

KEY: forensic, mental health, facilities**February 21, 2012****Notice of Continuation April 14, 2016****62A-15-902(2)(c)****62A-15-105**

R590. Insurance, Administration.**R590-208. Uniform Application for Certificates of Authority.****R590-208-1. Authority.**

This rule is promulgated pursuant to Subsections 31A-2-201(2), 31A-2-201(3)(a), and 31A-2-202(2) wherein the commissioner is empowered to administer and enforce Title 31A; to make administrative rules to implement the provisions of Title 31A; to prescribe forms for information needed to enforce Title 31A and to implement uniformity between states and other jurisdictions as may apply to the admission and organization of insurance companies in Utah.

R590-208-2. Purpose.

The purpose of this rule is ensure that the commissioner's requirements for domestic, foreign and alien insurer applications to obtain a certificate of authority in Utah shall be consistent with requirements of other states, the information included in the Uniform Certificate of Authority Primary Application, and the Uniform Certificate of Authority Expansion Application of the National Association of Insurance Commissioners.

R590-208-3. Applicability and Scope.

This rule shall apply to all applicants seeking to obtain a certificate of authority for an insurer or an application for an organization permit to organize an insurer under Title 31A, Chapters 5, 7, 8, 9, 10, 11 or 14.

R590-208-4. Uniform Application for Admission as an Insurer.

In order to promote efficiency and uniformity between the Utah Insurance Department, its sister states and other jurisdictions, the commissioner hereby requires the information included in the Uniform Certificate of Authority Primary Application and Uniform Certificate of Authority Expansion Application of the National Association of Insurance Commissioners shall be submitted in accordance with the requirements of Sections 31A-5-204, 31A-7-201, 31A-8-205, 31A-9-205, 31A-10-203, 31A-11-105 and 31A-14-201.

To the extent that the above sections require other information that is not required in these uniform applications, an applicant for a certificate of authority and organization permit shall furnish the additional information as a supplement to the information required in the uniform applications.

R590-208-5. Severability.

If a provision of this rule or its application to any person or circumstance is or for any reason held to be invalid, the remainder of the rule and the application of these provisions shall not be affected.

KEY: insurance certificate of authority**January 24, 2002****Notice of Continuation April 21, 2016****31A-2-201****31A-2-202**

R590. Insurance, Administration.**R590-235. Medicare Prescription Drug Plan.****R590-235-1. Authority.**

This rule is promulgated pursuant to Subsection 31A-2-201 (3), wherein the Commissioner is empowered to administer and enforce Title 31A, and to make administrative rules to implement the provisions of Title 31A.

R590-235-2. Purpose and Scope.

(1) The purpose of this rule is to establish licensing and regulatory requirements in the State of Utah for a stand-alone prescription drug plan (PDP).

(a) Title I of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, commonly referred to as the Medicare Modernization Act (MMA), created requirements for a new type of organization called a Prescription Drug Plan (PDP) to provide Medicare Part D benefits.

(b) Base requirements for contracts with PDP sponsors include state licensure as a risk bearing entity in the jurisdiction where the entity proposes to serve Medicare Part D beneficiaries.

(2) This rule applies to all entities that offer a stand alone PDP in the State of Utah.

R590-235-3. Definitions.

In addition to the definitions of Section 31A-1-301, the following definitions shall apply for the purpose of this rule:

(1) "Medicare" means the "Health Insurance for the Aged Act," Title XVIII of the Social Security Amendments of 1965, as then constituted or later amended.

(2) "Stand-Alone Medicare Prescription Drug Plan (PDP):"

(a) means a prescription drug plan, offered by insurers and other private companies to provide Medicare Part D benefits under the Medicare Modernization Act; and

(b) does not include a Medicare prescription drug plan included in the benefit package offered by a Medicare Advantage company.

(3) "Medicare Advantage Company" means a company selling a Medicare authorized product replacing Medicare Part A and Part B benefits.

R590-235-4. Licensure and Regulatory Requirements.

A PDP may be licensed and regulated as either a Utah domiciled health maintenance organization (HMO), a limited health plan (LHP), or an indemnity insurer, either Utah domiciled or foreign.

(1) Regulatory requirements for a Utah domiciled PDP organized as:

(a) an HMO or LHP are established by Title 31A, Chapter 8;

(b) an indemnity insurer are established by Title 31A, Chapter 5.

(2) Regulatory requirements for a foreign indemnity insurer are established by Title 31A, Chapter 14.

(3) A PDP is required to file Quarterly and Annual Statement Blanks in accordance with the instructions provided by the National Association of Insurance Commissioners (NAIC) and in accordance with Statutory Accounting Principles (SAP).

(4) A PDP applicant must apply for licensure using the NAIC Uniform Certificate of Authority Application forms:

(a) Primary Application Form for a domestic insurer PDP; or

(b) Expansion Application Form for a foreign indemnity insurer PDP.

R590-235-5. Minimum Capital and Surplus Requirements.

(1) The minimum capital or permanent surplus

requirement is:

(a) \$400,000 for indemnity insurers, whether domestic or foreign;

(b) \$100,000 for an HMO; and

(c) for an LHP:

(i) may not be less than \$10,000 or exceed \$100,000.

(ii) the actual amount is to be set by the commissioner after a hearing and consideration of various factors.

(2) Risk-Based Capital (RBC) requirements, as outlined in Section 31A-17-602, are applicable regardless of the license type.

R590-235-6. Enforcement Date.

The commissioner will begin enforcing the provisions of this rule 45 days after adoption.

R590-235-7. Severability.

If any provision of this rule or the application of it to any person or circumstance is for any reason held to be invalid, the remainder of the rule and the application of the provision to other persons or circumstances may not be affected by it.

KEY: prescription drug plans**June 7, 2006****Notice of Continuation April 21, 2016****31A-2-201**

R592. Insurance, Title and Escrow Commission.**R592-11. Title Insurance Producer Annual and Controlled Business Reports.****R592-11-1. Authority.**

This rule is promulgated pursuant to:

(1) Section 31A-2-404(2)(a), which requires the Title and Escrow Commission (Commission) to make rules related to title insurance;

(2) Section 31A-23a-413, which requires the annual filing of a report containing a verified statement of the financial condition, transactions, and affairs by an agency title insurance producer and an individual title insurance producer who is not an employee of a title insurer or who has not been designated to an agency title insurance producer;

(3) Subsection 31A-23a-503(8), which requires the annual filing of a controlled business report; and

(4) Subsection 31A-23a-406(1)(g), which requires the maintenance of a physical address in Utah.

R592-11-2. Purpose and Scope.

(1) The purpose of this rule is to establish the form and filing deadline for the Title Insurance Producer Annual Report and Controlled Business Report required by Section 31A-23a-413 and Subsection 31A-23a-503(8)(a).

(2) This rule applies to an agency title insurance producer and an individual title insurance producer who is not an employee of a title insurer or who has not been designated to an agency title insurance producer.

R592-11-3. Title Insurance Producer Annual Report.

(1) The following shall file a Title Insurance Producer Annual Report not later than April 30 of each year if they have conducted title insurance business in the State of Utah within the time period described in R592-11-3(4):

(a) an agency title insurance producer; and

(b) an individual title insurance producer who is not an employee of a title insurer or who has not been designated to an agency title insurance producer.

(2) A Title Insurance Producer Annual Report shall consist of:

(a) a balance sheet and an income and expense statement prepared and presented in conformity with generally accepted accounting principles;

(i) title premium, including endorsement income and expenses, shall be reported separately from the escrow income and expenses;

(b) the name and address of each financial institution where a title or escrow trust account is maintained;

(c) proof of financial protection that complies with Subsection 31A-23a-204(2) shall consist of one or more of the following:

(i) a copy of the declarations page of a fidelity bond;

(ii) a copy of the declarations page of a professional liability insurance policy; or

(iii) a copy of the commissioner's approval of equivalent financial protection approved by the commissioner;

(d) the name of the individual title insurance producer designated as the "qualifying licensee," as provided in 31A-23a-204; and

(e) the physical address in Utah maintained by the agency title insurance producer or individual title insurance producer, pursuant to 31A-23a-406(1)(g).

(3) Subsection R592-11-3-(2)(c) does not apply to an attorney exempted under 31A-23a-204(8).

(4) The Title Insurance Producer Annual Report period shall be the preceding calendar year.

(5) A Title Insurance Producer Annual Report will be considered protected data if the producer submitting the report requests classification as a protected record in accordance with

Sections 63G-2-305 and 63G-2-309.

R592-11-4. Controlled Business Report.

(1) The following that conduct title insurance business in the State during the time period described in R592-11-4(2)(a) shall file an annual Controlled Business Report not later than April 30 of each year:

(a) an agency title insurance producer; and

(b) an individual title insurance producer who is not an employee of a title insurer or who has not been designated to an agency title insurance producer.

(2)(a) The Controlled Business Report period shall be the preceding calendar year and shall contain the information required in Subsection 31A-23a-503(8)(a); and

(b) contain the name, address, and percentage of ownership of each owner.

(3) A Controlled Business Report is a public record upon filing.

R592-11-5. Electronic Filing of Title Insurance Producer Annual Report and Controlled Business Report.

(1) The Title Insurance Producer Annual Report and the Controlled Business Report shall be submitted together electronically using the Department of Insurance's secure file upload site located at <https://forms.uid.utah.gov/insurance/fileUploads/>.

(a) Registration may be required.

(2) The Title Insurance Producer Annual Report and the Controlled Business Report shall be submitted not later than April 30 of each year as attachments to the Title Insurance Agency Annual Reports Transmittal Form.

(3) The following report forms, which are available on the department's website, shall be used to submit the Title Insurance Producer Annual Report and the Controlled Business Report:

(a) Title Insurance Producer Annual and Controlled Business Reports Transmittal form; and

(b) Controlled Business Report form.

(4) Actual copies of the forms may be used or may be adapted to a particular word processing system, however, if adapted, the content, size, and font shall be similar and shall be:

(a) converted to one portable document format or PDF prior to submission; and

(b) submitted in the order listed on the Annual Report Checklist located at <http://insurance.utah.gov/agent/title/agency-reports-information.php>.

R592-11-6. Penalties.

A person found to be in violation of this rule shall be subject to penalties as provided under Section 31A-2-308.

R592-11-7. Enforcement Date.

The commissioner will begin enforcing this rule 45 days from the rule's effective date.

R592-11-8. Severability.

If any provision or clause of this rule or its application to any person or situation is held invalid, that invalidity shall not affect any other provision or application of this rule which can be given effect without the invalid provision or application, and to this end the provisions of this rule are declared to be severable.

KEY: title insurance

April 15, 2016

Notice of Continuation June 15, 2011

31A-2-404(2)(a)

31A-23a-406(1)(g)

31A-23a-413

31A-23a-503(8)

R592. Insurance, Title and Escrow Commission.**R592-15. Submission of a Schedule of Minimum Charges for Escrow Services.****R592-15-1. Authority.**

This rule is promulgated by the Title and Escrow Commission pursuant to Section 31A-2-404 which requires the Commission to make rules related to title insurance.

R592-15-2. Purpose and Scope.

(1) The purpose of this rule is to establish the procedures for filing a Schedule of Minimum Charges for Escrow Services pursuant to Section 31A-19a-209.

(2) This rule applies to all title insurers, agency title insurance producers and individual title insurance producers who are not an employee of a title insurer or who are not designated to an agency title insurance producer that provide escrow services in Utah.

R592-15-3. Required Documents.

(1) The department requires that the documents described in this section shall be used for all filings, and are available on the department's web site, <http://www.insurance.utah.gov>.

(a) "Transmittal Document for Agency Title Insurance Producer or Individual Title Insurance Producer"; and

(b) "Schedule of Minimum Charges for Escrow Services."

R592-15-4. Definitions.

In addition to the definitions of Sections 31A-1-301, 31A-2-402, and 31A-19a-102, the following definitions shall apply for the purpose of this rule.

(1) "Additional escrow services" means escrow settlement services that are rendered in excess of the escrow settlement services not specifically shown in the minimum escrow charges listed in the Schedule of Minimum Charges for Escrow Services.

(2) "Certification" means a statement that the filing being submitted is in compliance with Utah laws and rules.

(3) "Charge" means a dollar amount charged for a service rendered by a title insurer, agency title insurance producer, or individual title insurance producer.

(4) "Document preparation" means the preparation or compilation of documents in connection with escrow services.

(5) "Electronic filing" or "file electronically" means:

(a) a filing submitted via the internet by a title insurer using the System for Electronic Rate and Forms Filings (SERFF); or

(b) a filing submitted via an email system by an agency title insurance producer or an individual title insurance producer.

(6) "Escrow charge" means a dollar amount charged for an escrow service shown in the Schedule of Minimum Charges for Escrow services.

(7) "Escrow services" means those services related to settlements of real estate transactions.

(8) "File and use" means a filing can be used, sold, or offered for sale after it has been filed with the department.

(9) "File before use" means a filing can be used, sold, or offered for sale after it has been filed with the department, and a stated period of time has elapsed from the date filed.

(10) "Filer" means a person or entity who submits a filing.

(11) "Filing Objection Letter" means a letter issued by the commissioner when a review has determined the filing fails to comply with Utah law and rules. The Filing Objection Letter may, in addition to requiring correction of non-compliant items, request clarification or additional information pertaining to the filing.

(12) "Letter of Authorization" means a letter signed by an officer of the licensee on whose behalf the filing is submitted and which designates filing authority to the filer.

(13) "Long-term escrow" means a "For Benefit Of" (FBO)

account that is for the purpose of payment collection and administration of seller-financed transactions, as described by an escrow agreement.

(14) "Mini escrow" means an escrow settlement service conducted by an agency title insurance producer to clear a title, obtain payoffs and record necessary closing documents for a lender that performs his or her own closing service.

(15) "Minimum escrow fee" means the minimum amount that must be charged for escrow settlement services that are rendered.

(16) "Order to Prohibit Use" means an order issued by the commissioner that prohibits the use of a filing.

(17) "Other settlement services" means additional services not specifically listed in the Schedule of Minimum Charges for Escrow Services.

(18) "Rejected" means a filing is:

(a) not submitted in accordance with Utah laws and rules;

(b) returned to the filer by the department, with the reasons for rejection; and

(c) not considered filed with the department.

R592-15-5. General Filing Information.

(1) Each filing submitted must be accurate, consistent, complete, and contain all required documents in order for the filing to be processed in a timely and efficient manner. The commissioner may request any additional information deemed necessary.

(2) Licensees are responsible for assuring compliance with Utah laws and rules. Filings not in compliance with Utah laws and rules are subject to regulatory action under Section 31A-2-308.

(3) A filing that does not comply with this rule will be rejected as incomplete and returned to the filer. A rejected filing:

(a) is not considered filed with the department;

(b) must be submitted as a new filing; and

(c) will be charged a new filing fee.

(4) Prior filings will not be researched to determine the purpose of the current filing.

(5) The department does not review or proofread every filing.

(a) A filing may be reviewed:

(i) when submitted;

(ii) as a result of a complaint;

(iii) during a regulatory examination or investigation; or

(iv) at any other time the department deems necessary.

(b) If a filing is reviewed and is not in compliance with Utah laws and rules, a Filing Objection Letter or an Order to Prohibit Use will be issued to the filer. The commissioner may require the licensee to disclose deficiencies in rating practices to affected consumers.

(6)(a) Filing corrections are considered informational.

(b) Filing corrections must be submitted within 15 days of the date the original filing was submitted to the department. The filer must reference the original filing.

(c) A new filing is required if a filing correction is made more than 15 days after the date of the original filing was submitted to the department. The filer must reference the original filing.

(7) If responding to a Filing Objection Letter or an Order to Prohibit Use, refer to R592-15-9.

(8) A filer must notify the department when withdrawing a previously filed rate.

R592-15-6. Filing Requirements.

(1) A title insurer, agency title insurance producer, or individual title insurance producer who is not an employee of a title insurer or who is not designated to an agency title insurance producer shall electronically file a Schedule of Minimum

Escrow Service Charges.

(2) Only an individual who is authorized to act on behalf of the insurer, agency title insurance producer or individual title insurance producer can submit a filing.

(3)(a) An initial Schedule of Minimum Charges for Escrow Services filing is a file and use filing and is effective the day the initial schedule is filed.

(b) A revised Schedule of Minimum Charges for Escrow Services filing is a file before use filing and is effective:

(i) 30 calendar days after the revised Schedule of Minimum Charges for Escrow Services is filed; or

(ii) a date specified by the filer that is later than 30 calendar days after the revised Schedule of Minimum Charges for Escrow Services is filed.

(4) All filings must be submitted as an electronic filing via:

(a) email; or

(b) SERFF.

(5) Email Filing: A complete email filing consists of the following:

(a) an email with a title showing the name of the filer and stating that it is an escrow rate filing;

(b) Utah Transmittal Document for Agency Title Insurance Producer or Individual Title Insurance Producer, completed and containing the following items in the following order:

(i) completed filing description, contained in Section 9 of the transmittal document, with the following information presented in the order shown.

(A) Certification.

(I) The filer must certify that a filing has been properly completed AND is in compliance with Utah laws and rules.

(II) The following statement must be included in the filing description: "BY SUBMITTING THIS FILING I CERTIFY THAT THE ATTACHED FILING HAS BEEN COMPLETED IN ACCORDANCE WITH UTAH ADMINISTRATIVE RULE R592-15 AND IS IN COMPLIANCE WITH APPLICABLE UTAH LAWS AND RULES".

(III) A filing will be rejected if the certification is false, missing, or incomplete.

(IV) a certification that is false may subject the licensee to administrative action.

(B) Indicate if the filing is:

(I) new;

(II) replacing or modifying a previous submission, with changes described;

(III) previously rejected, with reasons for rejection and previous filing's submission date; or

(IV) previously objected to or prohibited, with reasons for resubmission.

(c) Schedule of Minimum Charges for Escrow Services, completed as follows:

(i) all blank fields must be completed;

(ii) if a listed service is not performed by a licensee, the field must show "N/A" or "Not Applicable"; and

(iii) The Schedule of Minimum Charges for Escrow Services shall not be altered.

(d) Letter of Authorization.

(i) When the filer is not the licensee, a Letter of Authorization from the licensee must be attached.

(ii) The licensee remains responsible for making sure that the filing is in compliance with Utah laws and rules.

(e) As required by subsection 31A-19a-203(1)(e)(i), the rate filing fee must be received by the department within 5 days of the electronic submission or the filing will be rejected.

(6) SERFF Filing. A complete SERFF filing consists of the following:

(a) The completed description section on the general information tab, presented in the order shown below.

(i) Certification.

(A) The filer must certify that a filing has been properly

completed AND is in compliance with Utah laws and rules.

(B) The following statement must be included in the filing description: "BY SUBMITTING THIS FILING I CERTIFY THAT THE ATTACHED FILING HAS BEEN COMPLETED IN ACCORDANCE WITH UTAH ADMINISTRATIVE RULE R592-15 AND IS IN COMPLIANCE WITH APPLICABLE UTAH LAWS AND RULES".

(C) A filing will be rejected if the certification is false, missing, or incomplete.

(D) A certification that is false may subject the licensee to administrative action.

(ii) Indicate if the filing is:

(A) new;

(B) replacing or modifying a previous submission, with changes described;

(C) previously rejected, with reasons for rejection, and previous filing's submission date; or

(D) previously objected to or prohibited, with reasons for resubmission.

(b) Schedule of Minimum Charges for Escrow Services completed as follows, and attached to the rate/rule schedule tab:

(i) all blank fields must be completed;

(ii) if a listed service is not performed by a licensee, the field must show "N/A" or "Not Applicable"; and

(iii) The Schedule of Minimum Charges for Escrow Services shall not be altered.

(c) Letter of Authorization.

(i) When the filer is not the licensee, a Letter of Authorization from the licensee must be attached.

(ii) The licensee remains responsible for making sure that the filing is in compliance with Utah laws and rules.

(d) As required by subsection 31A-19a-203(1)(e)(i), the rate filing fee must be received by the department within 5 days of the electronic submission or the filing will be rejected.

R592-15-7. Charges.

(1) Escrow Service Charges.

(a) In accordance with subsection 31A-19a-209(3), no charge may be filed or used that would cause the filer to operate at less than the cost of doing the business of escrow.

(b) Only minimum escrow charges shown in the Schedule of Minimum Charges for Escrow Services must be filed.

(2) Other Settlement Services Charges.

(a) other settlement services charges will be used for services not specifically shown in the Schedule of Minimum Charges for Escrow Services.

(b) other settlement service charge must be filed as a per hour charge.

(3) Document Preparation Charge.

Only document charges shown in the Schedule of Minimum Charges for Escrow Services must be filed.

(4) Other services which are not specifically listed on the Schedule of Minimum Charges for Escrow services may be rendered provided a justifiable charge is made.

R592-15-8. Correspondence and Status Checks.

(1) When corresponding with the department, provide the following information to identify the original filing:

(a) type of filing;

(b) date of filing; and

(c) submission method; SERFF or email.

(2) A filer can request the status of its filing 60 days after the date of submission.

R592-15-9. Responses.

(1) A response to a Filing Objection Letter must include:

(a) a cover letter identifying the changes made; and

(b) revised documents with all changes highlighted.

(2)(a) An Order to Prohibit Use becomes final 15 days

after the date of the Order.

(b) Use of the filing must be discontinued not later than the date specified in the Order.

(c) To contest an Order to Prohibit Use, the commissioner must receive a written request for a hearing no later than 15 days after the date of the Order.

(d) Once the Order to Prohibit Use has been issued, a new filing is required if the company chooses to make the requested changes addressed in the original Filing Objection Letter. The new filing must reference the previously prohibited filing.

R592-15-10. Penalties.

A person found to be in violation of this rule shall be subject to penalties under Section 31A-2-308.

R592-15-11. Enforcement Date.

The commissioner will begin enforcing this rule 45 days from the effective date of this rule.

R592-15-12. Severability.

If any provision of this rule or its application to any person or situation is held to be invalid, that invalidity shall not affect any other provision or application of this rule which can be given effect without the invalid provision or application, and to this end the provisions of this rule are declared to be severable.

KEY: title escrow filings

November 2, 2015

Notice of Continuation April 6, 2016

31A-2-404

R597. Judicial Performance Evaluation Commission, Administration.**R597-3. Judicial Performance Evaluations.****R597-3-1. Evaluation Cycles.**

(1) For judges not serving on the supreme court:

(a) The mid-term evaluation cycle. Except as provided in subsection (3) the mid-term evaluation cycle begins upon the appointment of the judge or on the first Monday in January following the retention election of the judge and ends 2 1/2 years later, on June 30th of the third year preceding the year of the judge's next retention election.

(b) The retention evaluation cycle. The retention evaluation cycle begins the day after the mid-term evaluation cycle is finished and ends two years later, on June 30th of the year preceding the year of the judge's next retention election.

(2) For justices serving on the supreme court:

(a) The initial evaluation cycle. The initial evaluation cycle begins upon the appointment of the justice or on the first Monday in January following the retention election of the justice and ends 2 1/2 years later, on June 30th of the seventh year preceding the year of the justice's next retention election.

(b) The mid-term evaluation cycle. The mid-term evaluation cycle begins the day after the initial evaluation cycle is finished and ends four years later, on June 30th of the third year preceding the year of the justice's next retention election.

(c) The retention evaluation cycle. The retention evaluation cycle begins the day after the mid-term evaluation cycle is finished and ends two years later, on June 30th of the year preceding the year of the justice's next retention election.

(3) Timing of evaluations within cycles. In order to allow judges time to incorporate feedback from midterm evaluations into their practices, no evaluations shall be conducted during the first six months of the retention cycle.

R597-3-2. Survey.

(1) General provisions.

(a) All surveys shall be conducted according to the evaluation cycles described in R597-3-1, supra.

(b) The commission may provide a partial midterm evaluation to any judge whose appointment date precludes the collection of complete midterm evaluation data.

(c) The commission shall post on its website the survey questionnaires upon which the judge shall be evaluated at the beginning of the survey cycle.

(d) The commission may select retention survey questions from among the midterm survey questions.

(e) Periodically, reviews may be conducted to ensure compliance with administrative rules governing the survey process.

(f) The commission may consider narrative survey comments that cannot be reduced to a numerical score.

(g) Surveys shall be distributed by the third-party contractor engaged by the commission to conduct the survey. The contractor shall determine the maximum number of survey requests sent to a respondent, but in no event shall any respondent receive more than nine survey requests.

(2) Respondent Classifications

(a) Attorneys

(i) Identification of survey respondents. Within 10 business days of the end of the evaluation cycle, the clerk for the judge or the Administrative Office of the Courts shall identify as potential respondents all attorneys who have appeared before the judge who is being evaluated at a minimum of one hearing or trial during the evaluation cycle. Attorneys who have been confirmed as judges during the evaluation cycle shall be excluded from the attorney pool.

(ii) Number of survey respondents.

(A) For each judge who is the subject of a survey, the surveyor shall identify the number of attorneys most likely to

produce a response level yielding reliability at a 95% confidence level with a margin of error of +/- 5%.

(B) In the event that the attorney appearance list from the Administrative Office of the Courts contains an insufficient number of attorneys with one trial appearance or at least three total appearances before the evaluated judge to achieve the required confidence level, then the surveyor shall supplement the survey pool with other attorneys who have appeared before the judge during the evaluation cycle.

(iii) Sampling. The surveyor shall design the survey to comply with generally-accepted principles of surveying. All attorneys with one trial appearance or at least three total appearances before the evaluated judge shall be surveyed.

(b) Jurors

(i) Identification and number of survey respondents. All jurors who participate in deliberation shall be eligible to receive an online juror survey.

(ii) Distribution of surveys. Prior to the jury being dismissed, the bailiff or clerk in charge of the jury shall collect email addresses from all jurors. If email addresses are not available, street addresses shall be collected. The bailiff or clerk shall transmit all such addresses to the surveyor within 24 hours of collection. The surveyor shall administer the survey online and deliver survey results electronically to each judge. Paper surveys may be sent to those jurors who do not have access to email.

(c) Court Staff

(i) Definition of court staff who have worked with the judge. Court staff who have worked with the judge refers to employees of the judiciary who have regular contact with the judge as the judge performs judicial duties and also includes those who are not employed by the judiciary but who have ongoing administrative duties in the courtroom.

(ii) Identification of survey respondents. Court staff who have worked with the judge include, but are not limited to:

(A) judicial assistants;

(B) case managers;

(C) clerks of court;

(D) trial court executives;

(E) interpreters;

(F) bailiffs;

(G) law clerks;

(H) central staff attorneys;

(I) juvenile probation and intake officers;

(J) other courthouse staff, as appropriate;

(K) Administrative Office of the Courts staff.

(d) Juvenile Court Professionals

(i) Definition of juvenile court professional. A juvenile court professional is someone whose professional duties place that individual in court on a regular and continuing basis to provide substantive input to the court.

(ii) Identification of survey respondents. Juvenile court professionals shall include, where applicable:

(A) Division of Child and Family Services ("DCFS") child protection services workers;

(B) Division of Child and Family Services ("DCFS") case workers;

(C) Juvenile Justice Services ("JJS") Observation and Assessment Staff;

(D) Juvenile Justice Services ("JJS") case managers;

(E) Juvenile Justice Services ("JJS") secure care staff;

(F) Others who provide substantive professional services on a regular basis to the juvenile court.

(iii) Beginning with juvenile court judges standing for retention in 2014, juvenile court professionals shall be included as an additional survey respondent group for both the midterm and retention evaluation cycles.

(3) Anonymity and Confidentiality

(a) Definitions

(i) Anonymous.

(A) "Anonymous" means that the identity of the individual who authors any survey response, including comments, will be protected from disclosure.

(B) The independent contractor conducting the surveys shall provide to the commission all written comments from the surveys, redacted to remove any information that identifies the person commenting. The contractor shall also redact any information that discloses the identity of any crime victims referenced in a written comment.

(C) The submission of a survey form containing an anonymous narrative comment does not preclude any survey respondent from submitting a public comment in writing pursuant to the Judicial Performance Evaluation Commission Act.

(ii) Confidentiality: Confidentiality means information obtained from a survey respondent that the respondent may reasonably expect will not be disclosed other than as indicated in the survey instrument.

(iii) The raw form of survey results consists of quantitative survey data that contributes to the minimum score on the judicial performance survey.

(iv) The summary form of survey results consists of quantitative survey data in aggregated form.

R597-3-3. Courtroom Observation.

(1) General Provisions.

(a) Courtroom observations shall be conducted according to the evaluation cycles described in R597-3-1(1) and (2), supra.

(b) The commission shall provide notice to each judge at the beginning of the survey cycle of the courtroom observation process and of the instrument to be used by the observers.

(c) Only the content analysis of the individual courtroom observation reports shall be included in the retention report for each judge.

(2) Courtroom Observers.

(a) Selection of Observers

(i) Courtroom observers shall be volunteers, recruited by the commission through public outreach and advertising.

(ii) Courtroom observers shall be selected by the commission staff, based on written applications and an interview process.

(b) Selection Criteria. Observers with a broad and varied range of life experiences shall be sought. The following persons shall be excluded from eligibility as courtroom observers:

(i) persons with a professional involvement with the state court system, the justice courts, or the judge;

(ii) persons with a fiduciary relationship with the judge;

(iii) persons within the third degree of relationship with a state or justice court judge (grandparents, parents or parents-in-law, aunts or uncles, children, nieces and nephews and their spouses);

(iv) persons lacking computer access or basic computer literacy skills;

(v) persons currently involved in litigation in state or justice courts;

(vi) convicted felons;

(vii) persons whose background or experience suggests they may have a bias that would prevent them from objectively serving in the program.

(c) Terms and Conditions of Service

(i) Courtroom observers shall serve at the will of the commission staff.

(ii) Courtroom observers shall not disclose the content of their courtroom evaluations in any form or to any person except as designated by the commission.

(d) Training of Observers

(i) Courtroom observers must satisfactorily complete a training program developed by the commission before engaging

in courtroom observation.

(ii) Elements of the training program shall include:

(A) Orientation and overview of the commission process and the courtroom observation program;

(B) Classroom training addressing each level of court;

(C) In-court group observations, with subsequent classroom discussions, for each level of court;

(D) Training on proper use of observation instrument;

(E) Training on confidentiality and non-disclosure issues;

(F) Such other periodic trainings as are necessary for effective observations.

(3) Courtroom Observation Program.

(a) Courtroom Requirements

(i) During each midterm and retention evaluation cycle, a minimum of four different observers shall observe each judge subject to that evaluation cycle.

(ii) Each observer shall observe each judge in person while the judge is in the courtroom and for a minimum of two hours while court is in session. The observations may be completed in one sitting or over several courtroom visits.

(iii) If a judge sits in more than one geographic location at the judge's appointed level or a justice court judge serves in more than one jurisdiction, the judge may be observed in any location or combination of locations in which the judge holds court.

(iv) When the observer completes the observation of a judge, the observer shall complete the observation instrument, which will be electronically transferred to the commission or the third party contractor for processing.

(b) Travel and Reimbursement

(i) All travel must be preapproved by the executive director.

(ii) All per diem and lodging will be reimbursed, when appropriate, in accordance with Utah state travel rules and regulations.

(iii) Travel reimbursement forms shall be submitted on a monthly basis or whenever the observer has accumulated a minimum of 200 miles of travel.

(iv) Travel may be reimbursed only after the observer has satisfactorily completed and successfully submitted the courtroom observation report for which the reimbursement is sought.

(v) Overnight lodging

(A) Overnight lodging is reimbursable when the courtroom is located over 100 miles from home base and court is scheduled to begin before 9:30 a.m., with any exceptions preapproved by commission staff.

(B) Multiple overnight lodging is reimbursable where the commission staff determines it is cost-effective to observe several courtrooms in a single trip.

(vi) Each courtroom observer must provide a social security number or tax identification number to the commission in order to process state reimbursement.

(4) Principles and Standards used to evaluate the behavior observed.

(a) Procedural fairness, which focuses on the treatment judges accord people in their courts, shall be used to evaluate the judicial behavior observed in the courtroom observation program.

(b) To assess a judge's conduct in court with respect to procedural fairness, observers shall respond in narrative form to the following principles and behavioral standards:

(i) Neutrality, including but not limited to:

(A) displaying fairness and impartiality toward all court participants;

(B) acting as a fair and principled decision maker who applies rules consistently across court participants and cases;

(C) explaining transparently and openly how rules are applied and how decisions are reached.

- (D) listening carefully and impartially;
- (ii) Respect, including but not limited to:
 - (A) demonstrating courtesy toward attorneys, court staff, and others in the court;
 - (B) treating all people with dignity;
 - (C) helping interested parties understand decisions and what the parties must do as a result;
 - (D) maintaining decorum in the courtroom.
 - (E) demonstrating adequate preparation to hear scheduled cases;
 - (F) acting in the interests of the parties, not out of demonstrated personal prejudices;
 - (G) managing the caseload efficiently and demonstrating awareness of the effect of delay on court participants;
 - (H) demonstrating interest in the needs, problems, and concerns of court participants.
- (iii) Voice, including but not limited to:
 - (A) giving parties the opportunity, where appropriate, to give voice to their perspectives or situations and demonstrating that they have been heard;
 - (B) behaving in a manner that demonstrates full consideration of the case as presented through witnesses, arguments, pleadings, and other documents.
 - (C) attending, where appropriate, to the participants' comprehension of the proceedings.
- (c) Courtroom observers may also be asked questions to help the commission assess the overall performance of the judge with respect to procedural fairness.

R597-3-4. Minimum Performance Standards.

- (1) In addition to the minimum performance standards specified by statute or administrative rule, the judge shall:
 - (a) Demonstrate by a preponderance of the evidence, based on courtroom observations and relevant survey responses, that the judge's conduct in court promotes procedural fairness for court participants.
 - (b) Meet all performance standards established by the Judicial Council, including but not limited to:
 - (i) annual judicial education hourly requirement;
 - (ii) case-under-advisement standard; and
 - (iii) physical and mental competence to hold office.
- (2) No later than October 1st of the year preceding each general election year, the Judicial Council shall certify to the commission whether each judge standing for retention election in the next general election has satisfied its performance standards.

R597-3-5. Public Comments.

- (1) Persons desiring to comment about a particular judge with whom they have had experience may do so at any time, either by submitting such comments on the commission website or by mailing them to the executive director.
- (2) In order for the commission to consider comments in making its retention recommendation on a particular judge, comments about that judge must be received no later than December 1st of the year preceding the election in which the judge's name appears on the ballot.
- (3) Comments received after December 1st of the year preceding the election in which the judge's name appears on the ballot will be included as part of the judge's mid-term evaluation report in the subsequent evaluation cycle.
- (4) Comments received about a judge after the mid-term evaluation cycle ends will be included in the judge's next retention evaluation report.
- (5) Persons submitting comments pursuant to this section must include their full name, address, and telephone number with the submission.

R597-3-6. Judicial Retirements and Resignations.

- (1) For purposes of judicial performance evaluation, the commission shall evaluate each judge until the judge:
 - (a) provides written notice of resignation or retirement to the Governor;
 - (b) is removed from office;
 - (c) otherwise vacates the judicial office; or
 - (d) fails to properly file for retention.
- (2) For judges who provide written notice of resignation or retirement after a retention evaluation has been conducted but before it is distributed, the retention evaluation shall be sent to the Judicial Council.

R597-3-7. Publication of Retention Reports.

No later than three months after the filing deadline for a retention election, the commission shall post on its website the retention reports of all judges who have filed for that election.

KEY: judicial performance evaluations, judges, evaluation cycles, surveys
April 20, 2016
Notice of Continuation February 17, 2014

78A-12

R649. Natural Resources; Oil, Gas and Mining; Oil and Gas.**R649-1. Oil and Gas Definitions.****R649-1-1. Definitions.**

"Authorized Agent" means a representative of the director as authorized by the board.

"Aquifer" means a geological formation including a group of formations or part of a formation that is capable of yielding a significant amount of water to a well or spring.

"Artificial Liner" means a pit liner made of material other than clay or other in-situ material and which meets the requirements of R649-9-3, Permitting of Disposal Pits.

"Barrel" means 42 (US) gallons at 60 degrees Fahrenheit at atmospheric pressure.

"Board" means the Board of Oil, Gas and Mining.

"Carrier, Transporter or Taker" means any person moving or transporting oil or gas away from a well or lease or from any pool.

"Casing Pressure" means the pressure within the casing or between the casing and tubing at the wellhead.

"Central Disposal Facility" means a facility that is used by one or more producers for disposal of exempt E and P wastes and for which the operator of the facility receives no monetary remuneration, other than operating cost sharing.

"Class II Injection Well" means a well that is used for:

1. The disposal of fluids that are brought to the surface in connection with conventional oil or natural gas production and that may be commingled with wastewater produced from the operation of a gas plant that is an integral part of production operations, unless that wastewater is classified as a hazardous waste at the time of injection, or

2. Enhanced recovery of oil or gas, or

3. Storage of hydrocarbons that are liquids at standard temperature and pressure conditions.

"Closed System" means but is not limited to, the use of a combination of solids control equipment (i.e., shale shakers, flowline cleaners, desanders, desilters, mud cleaners, centrifuges, agitators, and necessary pumps and piping) incorporated in a series on the rig's steel mud tanks, or a self contained unit that eliminates the use of a reserve pit for the purpose of dumping and dilution of drilling fluids for the removal of entrained drill solids. A closed system for the purpose of these rules may with Division approval include the use of a small pit to receive cuttings, but does not include the use of trenches for the collection of fluids of any kind.

"Coalbed Methane" means natural gas that is produced, or may be produced, from coalbeds and rock strata associated with the coalbed.

"Commercial Disposal Facility" means a disposal well, pit or treatment facility whose owner(s) or operator(s) receives compensation from others for the temporary storage, treatment, and disposal of produced water, drilling fluids, drill cuttings, completion fluids, and any other exempt E and P wastes, and whose primary business objective is to provide these services.

"Completion of a Well" means that the well has been adequately worked to be capable of producing oil or gas or that well testing as required by the division has been concluded.

"Confining Strata" refers to a body of material that is relatively impervious to the passage of liquids or gases and that occurs either below, above, or lateral to a more permeable material in such a way that it confines or limits the movement of liquids or gases that may be present.

"Correlative Rights" means the opportunity of each owner in a pool to produce his just and equitable share of the oil and gas in the pool without waste.

"Cubic Foot" of gas means the volume of gas contained in one cubic foot of space at a standard pressure base of 14.73 psia and a standard temperature base of 60 degrees Fahrenheit.

"Day" means a period of 24 consecutive hours.

"Development Wells" means all oil and gas producing wells other than wildcat wells.

"Director" means the executive and administrative head of the division.

"Disposal Facility" means an injection well, pit, treatment facility or combination thereof that receives E and P Wastes for the purpose of disposal. This includes both commercial and noncommercial facilities.

"Disposal Pit" means a lined or unlined pit approved for the disposal and/or storage of E and P Wastes.

"Division" means the Division of Oil, Gas and Mining.

"Drilling Fluid" means a circulating fluid usually called mud, that is introduced in a drill hole to lubricate the action of the rotary bit, remove the drilling cuttings, and control formation pressures.

"E and P Waste" means Exploration and Production Waste, and is defined as those wastes resulting from the drilling of and production from oil and gas wells as determined by the Environmental Protection Agency (EPA), prior to January 1, 1992, to be exempt from Subtitle C of the Resource Conservation and Recovery Act (RCRA).

"Emergency Pit" means a pit used for containing fluids at an operating well during an actual emergency or for a temporary period of time.

"Enhanced Recovery" means the process of introducing fluid or energy into a pool for the purpose of increasing the recovery of hydrocarbons from the pool.

"Enhanced Recovery Project" means the injection of liquids or hydrocarbon or non-hydrocarbon gases directly into a reservoir for the purpose of augmenting reservoir energy, modifying the properties of the fluids or gases in the reservoir, or changing the reservoir conditions to increase the recoverable oil, gas, or oil and gas through the joint use of two or more well bores.

"Entity" means a well or a group of wells that have identical division of interest, have the same operator, produce from the same formation, have product sales from a common tank, LACT meter, gas meter, or are in the same participating area of a properly designated unit. Entity number assignments are made by the division in cooperation with other state government agencies.

"Field" means the general area underlaid by one or more pools.

"Gas" means natural gas or natural gas liquids or other gas or any mixture thereof defined as follows:

1. "Natural Gas" means those hydrocarbons, other than oil and other than natural gas liquids separated from natural gas, that occur naturally in the gaseous phase in the reservoir and are produced and recovered at the wellhead in gaseous form. Natural gas includes coalbed methane.

2. "Natural Gas Liquids" means those hydrocarbons initially in reservoir natural gas, regardless of gravity, that are separated in gas processing plants from the natural gas as liquids at the surface through the process of condensation, absorption, adsorption, or other methods.

3. "Other Gas" means hydrogen sulfide (H₂S), carbon dioxide (CO₂), helium (He), nitrogen (N), and other nonhydrocarbon gases that occur naturally in the gaseous phase in the reservoir or are injected into the reservoir in connection with pressure maintenance, gas cycling, or other secondary or enhanced recovery projects.

"Gas-Oil Ratio" means the ratio of the number of cubic feet of natural gas produced to the number of barrels of oil concurrently produced during any stated period. The term GOR is synonymous with gas-oil ratio.

"Gas Processing Plant" means a facility in which liquefiable hydrocarbons are removed from natural gas, including wet gas or casinghead gas, and the remaining residue gas is conditioned for delivery for sale, recycling or other use.

"Gas Well" means any well capable of producing gas in substantial quantities that is not an oil well.

"Ground Water" means water in a zone of saturation below the ground surface.

"Hearing" means any matter heard before the board or its designated hearing examiner.

"Horizontal Well" means a well bore drilled laterally at an angle of at least eighty (80) degrees to the vertical or with a horizontal projection exceeding one hundred (100) feet measured from the initial point of penetration into the productive formation through the terminus of the lateral in the same common source of supply.

"Illegal Oil or Illegal Gas" means oil or gas that has been produced from any well within the state in violation of Chapter 6 of Title 40, or any rule or order of the board.

"Illegal Product" means any product derived in whole or in part from illegal oil or illegal gas.

"Incremental Production" means that part of production that is achieved from an enhanced recovery project that would not have economically occurred under the reservoir conditions existing before the project and that has been approved by the division as incremental production.

"Injection or Disposal Well" means any Class II Injection Well used for the injection of air, gas, water or other substance into any underground stratum.

"Interest Owner" means a person owning an interest (working interest, royalty interest, payment out of production, or any other interest) in oil or gas, or in the proceeds thereof.

"Load Oil" means any oil or liquid hydrocarbon that is used in any remedial operation in an oil or gas well.

"Log or Well Log" means the written record progressively describing the strata, water, oil or gas encountered in drilling a well with such additional information as is usually recorded in the normal procedure of drilling including electrical, radioactivity, or other similar conventional logs, a lithologic description of samples and drill stem test information.

"Multiple Zone Completion" means a well completion in which two or more separate zones, mechanically segregated one from the other, are produced simultaneously from the same well.

"Oil" means crude oil or condensate or any mixture thereof, defined as follows:

1. "Crude Oil" means those hydrocarbons, regardless of gravity, that occur naturally in the liquid phase in the reservoir and are produced and recovered at the wellhead in liquid form.

2. "Condensate" means those hydrocarbons, regardless of gravity, that occur naturally in the gaseous phase in the reservoir that are separated from the natural gas as liquids through the process of condensation either in the reservoir, in the well bore or at the surface in field separators.

3. "Oil and Gas" shall not include gaseous or liquid substances derived from coal, oil shale, tar sands or other hydrocarbons classified as synthetic fuel.

"Oil and Gas Field" means a geographical area overlying an oil and gas pool.

"Oil Well" means any well capable of producing oil in substantial quantities.

"Operator or Designated Agent" means the person who has been designated by the owners or the board to operate a well or unit.

"Owner" means the person who has the right to drill into and produce from a reservoir and to appropriate the oil and gas that he produces, either for himself or for himself and others.

"Person" means and includes any natural person, bodies politic and corporate, partnerships, associations and companies.

"Pit" means an earthen surface impoundment constructed to retain fluids and oil field wastes.

"Pollution" means such contamination or other alteration of the physical, chemical or biological properties of any waters of the state, or the discharge of any liquid, gaseous or solid

substance into any waters of the state in such manner as will create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety or welfare; to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses; or to livestock, wild animals, birds, fish or other aquatic life.

"Pool" means an underground reservoir containing a common accumulation of oil or gas or both. Each zone of a general structure that is completely separated from any other zone in the structure is a separate pool. "Common source of supply" and "reservoir" are synonymous with "pool."

"Pressure Maintenance" means the injection of gas, water or other fluids into a reservoir, either to increase or maintain the existing pressure in such reservoir or to retard the natural decline in the reservoir pressure.

"Produced Water" means water produced in conjunction with the conventional production of oil and/or gas.

"Producer" means the owner or operator of a well capable of producing oil or gas.

"Producing Well" means a well capable of producing oil or gas.

"Product" means any commodity made from oil and gas.

"Production Facilities" means all storage, separation, treating, dehydration, artificial lift, power supply, compression, pumping, metering, monitoring, flowline, and other equipment directly associated with oil wells, gas wells or injection wells, prior to any processing plant or refinery.

"Purchaser or Transporter" means any person who, acting alone or jointly with any other person, by means of his own, an affiliated, or designated carrier, transporter or taker, shall directly or indirectly purchase, take or transport by any means whatsoever, or who shall otherwise remove from any well or lease, oil or gas produced from any pool, excepting royalty portions of oil or gas taken in kind by an interest owner who is not the operator.

"Recompletion" means any completion in a new perforated interval or pool within an established wellbore and approved as a recompletion by the division.

"Refinery" means a facility, other than a gas processing plant, where controlled operations are performed by which the physical and chemical characteristics of petroleum or petroleum products are changed.

"Reserve Pit" means a pit used to retain fluid during the drilling, completion, and testing of a well.

"Seismic Operator" means a person who conducts seismic exploration for oil or gas, whether for himself or as a contractor for others.

"Shut-in Well" means a well that is completed, is shown to be capable of production in paying quantities, and is not presently being operated.

"Spud In" means the first boring of a hole in the drilling of a well by any type of rig.

"State" means the State of Utah.

"Stratigraphic Test or Core Hole" means any hole drilled for the sole purpose of obtaining geological information. The general rules applicable to the drilling of a well will apply to the drilling of a stratigraphic test or core hole.

"Temporarily Abandoned Well" means a well that is completed, is shown not capable of production in paying quantities, and is not presently being operated.

"Temporary Spacing Unit" means a specified area of land designated by the board for purposes of determining well density and location. A temporary spacing unit shall not be a drilling unit as provided for in U.C.A. 40-6-6, Drilling Units, and does not provide a basis for pooling the interest therein as does a drilling unit.

"Underground Source of Drinking Water" (or USDW) means a fresh water aquifer or a portion thereof that supplies drinking water for human consumption or that contains less than

10,000 mg/1 total dissolved solids and that is not an exempted aquifer under R649-5-4.

"Waste" means:

1. The inefficient, excessive or improper use or the unnecessary dissipation of oil or gas or reservoir energy.
2. The inefficient storing of oil or gas.
3. The locating, drilling, equipping, operating, or producing of any oil or gas well in a manner that causes reduction in the quantity of oil or gas ultimately recoverable from a reservoir under prudent and economical operations, or that causes unnecessary wells to be drilled, or that causes the loss or destruction of oil or gas either at the surface or subsurface.
4. The production of oil or gas in excess of:
 - 4.1. Transportation or storage facilities.
 - 4.2. The amount reasonably required to be produced in the proper drilling, completing, testing, or operating of a well or otherwise utilized on the lease from which it is produced.
5. Underground or above ground waste in the production or storage of oil or gas.

"Waste Crude Oil Treatment Facility" means any facility or site constructed or used for the purpose of wholly or partially reclaiming, treating, processing, cleaning, purifying or in any manner making non-merchantable waste crude oil marketable.

"Well" means an oil or gas well, injection or disposal well, or a hole drilled for the purpose of producing oil or gas or both. The definition of well shall not include water wells, or seismic, stratigraphic test, core hole, or other exploratory holes drilled for the purpose of obtaining geological information only.

"Well Site" means the areas that are directly disturbed during the drilling and subsequent use of, or affected by production facilities directly associated with any oil well, gas well or injection well.

"Wildcat Wells" means oil and gas producing wells that are drilled and completed in a pool in which a well has not been previously completed as a well capable of producing in commercial quantities.

"Working Interest Owner" means the owner of an interest in oil or gas burdened with a share of the expenses of developing and operating the property.

"Workover" means any operation designed to sustain, to restore, or to increase the production rate, the ultimate recovery, or the reservoir pressure system of a well or group of wells and approved as a workover, a secondary recovery, a tertiary recovery, or a pressure maintenance project by the division. The definition shall not include operations that are conducted principally as routine maintenance or the replacement of worn or damaged equipment.

KEY: oil and gas law

June 2, 1998

Notice of Continuation February 3, 2012

40-6-1 et seq.

R651. Natural Resources, Parks and Recreation.**R651-412. Curriculum Standards for OHV Education Programs Offered by Non-Division Entities.****R651-412-1. Rulemaking Authority.**

Section 41-22-31 UCA states that the Board shall develop curriculum standards for a comprehensive OHV education program designed to instill the necessary knowledge, attitudes, skills necessary for safe OHV operation, and that the Division shall cooperate with the appropriate public and private organizations in the implementation of this program.

R651-412-2. Course Approval Process.

Outside providers wishing to have OHV education courses approved by the Division as adequate for meeting Utah's OHV education standard shall submit a copy of their proposed curricula to the for evaluation. The Division shall evaluate the proposed curricula against the standard specified in this rule and shall issue a letter of approval to providers who present curriculum packages that meet the standard.

R651-412-3. Course Completion.

Individuals who complete a training course approved under this rule shall be issued an OHV Education Certificate in accordance with 41-22-31 UCA.

R651-412-4. Curriculum Standards.

At a minimum, all courses approved by the Division shall provide the following course content and shall be presented at a level appropriate for the average fourth grade student. The method of course content delivery is not specified.

- (a) Description of OHV riding in Utah.
- (b) Utah State Parks regulatory responsibilities.
- (c) OHV terminology including, but not imited, to: throttle, fuel shut-off valve, brakes, shift leer, engine stop switch, choke, spark arrestor/muffler, headlights, engine, footrest, ignition switch.
- (d) Utah State Laws.
- (e) Riding positions, turning and stopping.
- (f) Hypothermia, wind chill and cold weather survival.
- (g) Riding on different types of terrain.
- (h) Pre-ride inspections.
- (i) Towing a trailer.
- (ii) Crossing roads and highways.
- (iii) Dangers of drugs and alcohol.
- (i) Ethics, responsible riding and trail etiquette.
- (j) Tread Lightly
- (k) Proper safety equipment.
- (l) Snowmobile courses will also include avalanche safety information.
- (m) Any hands-on training provided by an authorized provider shall be conducted in accordance with R651-408(1) and all applicable state and federal law.

**KEY: OHV education standards, parks
April 21, 2016
Notice of Continuation January 22, 2015**

41-22-30

R651. Natural Resources, Parks and Recreation.**R651-637. Antelope Island State Park Special Mule Deer and Bighorn Sheep Hunt.****R651-637-1. Authorization of a Hunt.**

(1) Hunting of mule deer and bighorn sheep on Antelope Island State Park is authorized, and access on Antelope Island State Park is authorized for the purpose of hunting mule deer and bighorn sheep.

(2) All hunting shall be confined to the designated hunting unit which consists of that portion of approximately 26,000 acres on Antelope Island lying south of the chain link fence, commonly known as the "2000 acre fence" beginning in Farmington Bay and running in a south southwesterly direction and ending at White Rock Bay.

(3) Season dates, permit numbers, and other parameters for hunts shall be established by cooperative agreement.

(a) The Division of Parks and Recreation and the Division of Wildlife Resources, through their respective policy boards, will enter into a cooperative agreement for the purpose of establishing:

(i) the number of permits issued annually for bighorn sheep and buck mule deer on Antelope Island;

(ii) season dates for each hunt;

(iii) procedures and regulations applicable to hunting on Antelope Island;

(iv) protocols for issuing permits and conducting hunts for antlerless deer on Antelope Island when populations require management; and

(v) procedures and conditions for transferring marketed hunting permit revenue from the Division of Wildlife Resources to the Division of Parks and Recreation.

(b) The cooperative agreement governing bighorn sheep and mule deer hunting on Antelope Island and any subsequent amendment thereto shall be presented to the Wildlife Board and the Parks Board for approval prior to drawing or issuing hunting permits.

R651-637-2. Applicability of Law and Rules.

Hunting during the Antelope Island State Park Special Mule Deer and Bighorn Sheep Hunt shall be conducted in accordance with applicable state law, administrative code, hunting guidebooks of the Utah Wildlife Board, and in accordance with this rule.

R651-637-3. Season Dates.

The Antelope Island State Park bighorn sheep and mule deer hunts shall be conducted during legal hunting hours: beginning 30 minutes before official sunrise and ending 30 minutes after official sunset; the season dates established by cooperative agreement pursuant to R651-637-1(3).

R651-637-4. Hunting Party Size.

Each hunter licensed to hunt during the Antelope Island State Park Special Mule Deer and Bighorn Sheep Hunt may be accompanied by up to four (4) non-hunting companions. Guides, photographers, packers and all other individuals accompanying the hunter in camp or in the field are included in this limit.

R651-637-5. Fees.

(1) Day use fees for licensed hunters and their companions will be waived for the duration of their hunt.

(2) Camping fees for hunters and their companions who desire to camp on Antelope Island during the hunt will be charged per the current fee schedule. All campers shall camp in designated areas as directed by park management.

(3) Commercial activities related to hunt activities shall be individually evaluated and permitted through the Division's established processes.

R651-637-6. Access.

(1) Motor vehicle access will be limited to roads open to public use. No off-road, motorized vehicular travel will be allowed.

(2) Off-highway vehicles as defined in Title 41-22-2 UCA are not allowed on Antelope Island.

(3) During the hunt, foot and horse travel, including cross-country foot and horse travel, will be allowed in all areas of the hunting unit.

(4) Foot and horse travel including cross-country foot and horse travel for the purposes of pre-season scouting is authorized for hunters and their guides. Hunters and guides conducting pre-season scouting shall notify Park Management of their presence on the Island, and shall adhere to instructions provided by Park Management. Standard day use and camping fees shall apply to pre-season scouting visits.

R651-637-7. Mandatory Orientation.

Parks' Management may require permit holders and their guides to attend a hunting orientation meeting at Antelope Island State Park Visitor Center prior to the hunt.

R651-637-8. Mandatory Check-in and Check-out.

All hunters and their companions shall check in with Park Management at the beginning of their hunt and shall check out at the end of their hunt. Instructions on checking in and out will be provided.

R651-637-9. Handling of Harvested Wildlife.

The carcasses of all harvested wildlife shall be covered while being transported on Antelope Island or on the Antelope Island Causeway. This includes all parts of the harvested wildlife, including the head.

KEY: parks, hunting**April 21, 2016****Notice of Continuation October 6, 2015****79-4-304**

**R652. Natural Resources; Forestry, Fire and State Lands.
R652-122. County Cooperative Agreements with State for
Fire Protection.**

R652-122-100. Authority.

This rule implements subsection 65A-8-203(3)(a) and subsection 65A-8-203(3)(b) which require the division to establish minimum standards for a wildland fire ordinance and specify minimum standards for wildland fire training, certification and wildland fire suppression equipment. This rule is promulgated under general rulemaking authority of subsection 65A-1-4(2).

R652-122-200. Minimum Standards for Wildland Fire Ordinance.

(1) The division uses the International Urban Wildland Interface Code as a basis for establishing the minimum standards discussed in this document. A county ordinance that at least meets the minimum standards should be in place by September 2006.

(2) The Division incorporates by reference the 2003 International Code Council Urban-Wildland Interface Code as the minimum standard for wildland fire ordinance with these exceptions:

- (a) Section 101.1 Delete
- (b) Section 101.3 Delete "The extent of this regulation is intended to be tiered commensurate with the relative level of hazard present."
- (c) Section 101.3 Second paragraph, substitute "development and" for "unrestricted"
- (d) Section 101.4 Delete Exception
- (e) Section 101.5 In the Exception, delete "section 402.3"
- (f) Section 105.2 Delete "For buildings or structures erected for temporary uses, see Appendix A, Section A108.3, of this code"
- (g) Section 105.2 Add a number 15 to the list of activities that need a permit to read "Or other activities as determined by the code official"
- (h) Section 202 Delete "Critical Fire Weather, Ignition-Resistant Construction Class 1,2 and 3, Urban-Wildland Interface area"
- (i) Section 202 "See Critical Fire Weather" from Fire Weather definition
- (j) Section 202 Replace Fuel, Heavy definition with "Vegetation consisting of round wood 3 inches (76 mm) or larger in diameter. The amount of fuel (vegetation) would be 6 tons per acre or greater."
- (k) Section 202 Replace Fuel, Light definition with "Vegetation consisting of herbaceous and round wood less than 1/4 inch (6.4 mm) in diameter. The amount of fuel (vegetation) would be 1/2 ton to 2 tons per acre."
- (l) Section 202 Replace Fuel, Medium definition with "Vegetation consisting of round wood 1/4 to 3 inches (6.4mm to 76 mm) in diameter. The amount of fuel (vegetation) would be 2 to 6 tons per acre."
- (m) Section 202 Add the term Legislative Body with the following definition: "The governing body of the political jurisdiction administering this code"
- (n) Section 202 Add the term Brush, Tall with the following definition: "Arbor-like varieties of brush species and/or short varieties of broad-leaf trees that grow in compact groups or clumps. These groups or clumps reach heights of 4 to 20 feet. In Utah, this includes primary varieties of oak, maples, chokecherry, serviceberry and mahogany, but may also include other species."
- (o) Section 202 Add the term Brush, Short with the following definition: "Low-growing species that reach heights of 1 to 3 feet. Sagebrush, snowberry, and rabbitbrush are some varieties"
- (p) Section 202 Add the term Wildland Urban Interface

with the following definition "The line, area or zone where structures or other human development (including critical infrastructure that if destroyed would result in hardship to communities) meet or intermingle with undeveloped wildland or vegetative fuel."

- (q) Section 301 Delete
- (r) Section 302.1 Replace with " The legislative body shall declare the urban-wildland interface areas within the jurisdiction. The urban wildland interface areas shall be based on the maps created through Section 302."
- (s) Section 302.2 Replace with " In cooperation, the code official and the Division of Forestry, Fire and State Lands (FFSL) wildfire representative (per participating agreement between county and FFSL) will create or review Wildland Urban Interface area maps, to be recorded and filed with the clerk of the jurisdiction. These areas shall become effective immediately thereafter."
- (t) Section 302.3 Add "and the FFSL wildfire representative" between "official" and "shall".
- (u) Section 402.3 Delete
- (v) Section 403.2 Delete Exception
- (w) Section 403.3 Replace "typically used to respond to that location" to "to protect structures and wildlands"
- (x) Section 403.7 Add "It will be up to the code official to ascertain the standard based on local fire equipment, grade not to exceed 12%"
- (y) Section 404.1 Delete "or as required . . . with Section 402.1.2"
- (z) Section 404.1 Delete Exception
- (aa) Section 404.3 Delete "The draft site shall have emergency . . . with Section 402."
- (bb) Section 404.5 Replace "as follows: determined" with "by the local jurisdiction. NFPA 1142 may be used as a reference."
- (cc) Section 404.5.1 Delete entire section including Exception
- (dd) Section 404.5.2 Delete entire section including Exception
- (ee) Section 404.6 Replace with "The water system required by this code can only be considered conforming for purposes of determining the level of ignition-resistant construction (see Table 503.1)."
- (ff) Section 404.8 Delete the words "and hydrants"
- (gg) Section 404.9 After ". . . periodic tests as required by the code official." add the sentences "Code official shall establish a periodic testing schedule. Costs are to be covered by the water provider."
- (hh) Section 404.9 After the last sentence, add "Mains and appurtenances shall be installed in accordance with NFPA 24. Water tanks for private fire protection shall be installed in accordance with NFPA 22. Costs are to be covered by the water provider."
- (ii) Section 404.10.3 After ". . . dependent on electrical power" add "supplied by power grid" and after ". . . demands shall provide . . ." add "functional"
- (jj) Section 404.10.3 Replace "Exceptions" in its entirety with "When approved by the code official, a standby power supply is not required where the primary power service to the stationary water supply facility is underground or on-site generator."
- (kk) Section 405 Before Section 405.1 Add "The purpose of the plan is to provide a basis to determine overall compliance with this code, for determination of Ignition Resistant Construction (IRC) (see Table 503.1) and for determining the need for alternative materials and methods."
- (ll) Section 405.1 After "When required by a code official, a fire protection plan shall be prepared" add the words "and approved prior to the first building permit issuance or subdivision approval."

(mm) Chapter 5, Delete Table 502
 (nn) Section 505.2 Replace "Class B roof covering" with "Class A roof covering"
 (oo) Section 506.2 replace "Class C roof covering" with "Class A roof covering"
 (pp) Section 602 Delete
 (qq) Section 603.2 Replace "for the purpose of Table 503.1" with "for individual buildings or structures on a property"
 (rr) Section 603.2 Replace "10 feet or to the property line" with "30 feet or to the property line"
 (ss) Section 603.2 replace "along the grade" with "on a horizontal plane"
 (tt) Section 603.2 replace "may be increased" with "may be modified"
 (uu) Section 603.2 Delete "crowns of trees and structures"
 (vv) Add new Section 603.3 titled "Community fuel modification zones" with the following text: Fuel modification zones to protect new communities shall be provided when required by the code official in accordance with Section 603 in order to reduce fuel loads adjacent to communities and structures.
 (ww) Add new Section 603.3.1 titled "Land ownership" with the following text: Fuel modification zone land used to protect a community shall be under the control of an association or other common ownership instrument for the life of the community to be protected.
 (xx) Add new Section 603.3.2 titled "Fuel modification zone plans" with the following text: Fuel modification zone plans shall be approved prior to fuel modification work and shall be placed on a site grading plan shown in plan view. An elevation plan shall also be provided to indicate the length of the fuel modification zone on the slope. Fuel modification zone plans shall include, but not be limited to the following:
 (i) Plan showing existing vegetation
 (ii) Photographs showing natural conditions prior to work being performed
 (iii) Grading plan showing location of proposed buildings and structures, and set backs from top of slope to all buildings or structures
 (yy) Section 604.1 Add "annually, or as necessary" after "maintained"
 (zz) Section 604.4 First sentence should read "Individual trees and/or small clumps of trees or brush crowns extending to within . . ."
 (aaa) Section 607 change "20 feet" to "30 feet"
 (bbb) Chapter 7 Delete
 (ccc) Appendix A is included as optional recommendations rather than mandatory
 (ddd) Appendix B Last sentence changed to "Continuous maintenance of the clearance is required."
 (eee) Appendix C Below title, add "This appendix is to be used to determine the fire hazard severity."
 (fff) Appendix C-A1. Change to "One-lane road in, one-lane road out" and points change to 1, 10 and 15.
 (ggg) Appendix C-A2. Points change to 1 and 5
 (hhh) Appendix C-A3 Change to 3 entries: Road grade 5% or less, road grade 5-10% and road grade greater than 10%, with points at 1,5 and 10, respectively.
 (iii) Appendix C-A4. Points are now 1, 5, 8 and 10
 (jjj) Appendix C-A5 Change to "Present but unapproved" for 3 points, and "not present" for 5 points
 (kkk) Appendix C-B1. Fuel Types change to "Surface" and "Overstory". Surface has 4 categories -- Lawn/noncombustible, Grass/short brush, Scattered dead/down woody material, Abundant dead/down woody material; and the points are 1, 5, 10 and 15, respectively. Overstory has 4 categories -- Deciduous trees (except tall brush), Mixed deciduous trees and tall brush, Clumped/scattered conifers and/or tall brush,

Contiguous conifer and/or tall brush; and the points are 3, 10, 15 and 20, respectively.

(lll) Appendix C-B2. The 3 categories are changed to "70% or more of lots completed", "30% to 70% of lots completed" and "Less than 30% of lots completed" and the points would be 1, 10 and 20, respectively.

(mmm) Appendix C-C Replace first category with "Located on flat, base of hill, or setback at crest of hill"; Replace second category with "On slope with 0-20% grade"; Replace third category with "On slope with 21-30% grade"; Replace fourth category with "On slope with 31% grade or greater"; Add fifth category that reads "At crest of hill with unmitigated vegetation below"; replace the points with 1, 5, 10, 15 and 20 for the five categories.

(nnn) Appendix C-E. Change the points to 1, 5, 10, 15 and 20.

(ooo) Appendix C-F. Drop down the second and third categories to third and fourth and insert new second category to read "Combustible siding/no deck"; The points for the four categories are 1, 5, 10 and 15.

(ppp) The new totals for "Moderate Hazard" are 50-75; "High Hazard" are 76-100; "Extreme Hazard" are 101+.

(qqq) Appendices D-H Delete

R652-122-300. Minimum Standards for Wildland Fire Training.

(1) These standards apply to fire departments representing those counties who have cooperative wildland fire protection agreements with the State of Utah or other fire departments which are contracted with the counties to provide fire protection on private wildland.

(2) All members of the fire department engaged in responding to private and state wildland fires within the county's jurisdiction will be certified by the Utah Fire Certification Council as Wildland Firefighter I. The standard must be obtained by June 1, 2007. For purposes of this rule, "engaged in private and state wildland fires"

(a) means firefighters who are directly involved in the suppression of a wildland fire; firefighters, on scene, who have supervisory responsibility or decision-making authority over those involved in the suppression of a wildland fire; or individuals who have fire suppression responsibilities within close proximity of the fire perimeter.

(b) does not mean a person used as a courier; driver of a vehicle not used for fire suppression; or a person used in a non-tactical, support or other peripheral function not in close proximity to a wildland fire.

(3) Fire Department personnel who supervise other firefighters on private and state wildland fires within the county's jurisdiction will be certified by the Utah Fire Certification Council as Wildland Firefighter II. This standard must be obtained June 1, 2014.

R652-122-400. Minimum Standards for Wildland Firefighting Equipment.

(1) The following standards are applicable to equipment used by fire departments representing those counties who have cooperative wildland fire protection agreements with the State of Utah. This includes county fire departments and other fire departments which are contracted with the counties to provide fire protection on private wildland. The Utah Division of Forestry, Fire and State Lands has determined that this standard be met by June 1, 2006.

(2) Engines and water tenders used on private wildland fires within the county's jurisdiction will meet the standard for the type of equipment plus appropriate hand tools and water handling equipment as determined by the National Wildfire Coordinating Group.

TABLE 1
Engines

Component	Type 1	Type 2	Type 3
Pump Rating (gpm)	1,000+ @ 150 psi	250+ @ 150 psi	150+ @ 250 psi
Tank Capacity (gal)	400+	400+	500+
Hose 2.5 inch	1,200 ft	1,000 ft	--
Hose 1.5 inch	400 ft	500 ft	500 ft
Hose 1 inch	--	--	500 ft
Ladders	48 ft	48 ft	--
Master Stream (gpm)	500	--	--
Personnel (minimum)	4	3	2

Component	Type 4	Type 5	Type 6
Pump Rating (gpm)	50 @ 100 psi	50 @ 100 psi	30 @ 100 psi
Tank Capacity (gal)	750+	400 - 750	150 - 400
Hose 2.5 inch	--	--	--
Hose 1.5 inch	300 ft	300 ft	300 ft
Hose 1 inch	300 ft	300 ft	300 ft
Ladders	--	--	--
Master Stream (gpm)	--	--	--
Personnel (minimum)	2	2	2

TABLE 2
Water Tenders

Component	Type 1	Type 2	Type 3
Tank Capacity (gal)	5,000+	2,500+	1,000+
Pump Capacity (gpm)	300+	200+	200+
Off Load Capacity (gpm)	300+	200+	200+
Max Refill Time (min)	30	20	15
Personnel			
tactical/nontactical	2/1	2/1	2/1

**KEY: minimum standards, wildland urban interface,
cooperative agreement
April 28, 2011
Notice of Continuation April 14, 2016**

65A-8-203

R765. Regents (Board of), Administration.**R765-608. Utah Engineering and Computer Science Scholarship Program.****R765-608-1. Purpose.**

To provide policy and procedures for administering the Utah Engineering and Computer Science Program ("UECSP" or "program").

R765-608-2. References.

2.1. Utah Code. Title 53B, Chapter 6, Section 105.7, Initiative student scholarship program.

2.2. State Board of Regents Policy R601, Board of Directors of the Utah Higher Education Assistance Authority.

2.3. State Board of Regents Policy R608, Utah Engineering and Computer Science Scholarship Program.

R765-608-3. Effective Date.

These policies and procedures are effective September 1, 2001.

R765-608-4. Definitions.

4.1. Eligible Student - A student who is enrolled on at least a half-time basis in a Qualifying Institution in a Qualifying Program, in good standing, and maintaining satisfactory academic progress as defined by the institution.

4.2. Qualifying Institution - A college or university of the Utah System of Higher Education (USHE) which offers one or more Qualifying Programs.

4.3. Qualifying Program - An accredited engineering, computer science, or related technology degree program. Related technology degree programs shall be limited to those certified by the Commissioner of Higher Education, in accordance with such criteria as may be established pursuant to UCA 53B-6-105.

4.4. Recipient - A person who declares intent to complete a qualifying program and who receives a scholarship award.

4.5. Technology Initiative Advisory Board - or the Advisory Board is the committee whose members are appointed by the heads of all three branches of government; the majority of members are appointed by the governor.

4.6. USHE - the Utah System of Higher Education, which includes the University of Utah, Utah State University, Weber State University, Utah Valley University, Southern Utah University, Dixie State University, Snow College, Salt Lake Community College.

R765-608-5. Policy.

5.1. Program Description - UECSP is a program authorized as part of the higher education Engineering and Computer Science Initiative established with an effective date of July 1, 2001. UCA 53B-6-105.7 provides for establishment of the program "to recruit and train engineering, computer science, and related technology students to assist in providing for and advancing the intellectual and economic welfare of the state," and authorizes the State Board of Regents to provide by rule for the overall administration of the program.

5.2. Program Administration - Staff to the Regents will administer the program including funding distribution. The Technology Initiative Advisory Board assists and makes recommendations to the State Board of Regents.

5.3. Program Design - The Technology Initiative Advisory Board shall make recommendations by June 1 of each year to the State Board of Regents on the allocation and distribution of monies from the program fund. These funds are to be used for degree programs in the areas of engineering, computer science, and related technology programs. The distribution of these funds to the institutions is based on a formula which shall be developed by the Technology Initiative Advisory Board based on several components:

5.3.1 the number of graduates from the previous year,

5.3.2 the number and level of degrees offered, and

5.3.3 the program length of the degree offered at each institution.

5.4 Recipients' Post-Graduation Employment. It is the intent of the program that recipients of the UECSP funding will work in the state of Utah, in a field requiring the use of their degree, after graduating from a qualifying program.

5.5 Cancellation Policy. A scholarship may be cancelled at any time by the institution of attendance, if the student fails to make reasonable progress towards obtaining the degree or there appears to be a reasonable certainty that the student does not intend to work in the state upon graduation.

R765-608-6. Funds.

6.1. Distribution of Funds. Scholarship funds will be distributed annually to the institutions for disbursement to the awarded students.

6.2. Reporting of Funds. Institutions will report annually on the performance of the funds at the fiscal year's end. These reporting measures may include, but are not limited to the following:

6.2.1. the number of awards given,

6.2.2. the amount of the award,

6.2.3. the recipients' completion of course work,

6.2.4. the recipients' anticipated graduation date, and

6.2.5. the program in which the recipient is enrolled.

KEY: higher education, scholarships

April 11, 2011

Notice of Continuation April 19, 2016

53B-6

R865. Tax Commission, Auditing.**R865-19S. Sales and Use Tax.****R865-19S-1. Sales and Use Taxes Distinguished Pursuant to Utah Code Ann. Section 59-12-103.**

A. The tax imposed on amounts paid or charged for transactions under Title 59, Chapter 12 is a:

1. sales tax, if the tax is collected and remitted by a seller on the seller's in-state or out-of-state sales; or
2. use tax, if the tax is remitted by a purchaser.

B. The two taxes are compensating taxes, one supplementing the other, but both cannot be applicable to the same transaction. The rate of tax is the same.

R865-19S-2. Nature of Tax Pursuant to Utah Code Ann. Section 59-12-103.

A. The sales and use taxes are transaction taxes imposed upon certain retail sales and leases of tangible personal property, as well as upon certain services.

B. The tax is not upon the articles sold or furnished, but upon the transaction, and the purchaser is the actual taxpayer. The vendor is charged with the duty of collecting the tax from the purchaser and of paying the tax to the state.

R865-19S-4. Collection of Tax Pursuant to Utah Code Ann. Section 59-12-107.

(1) For purposes of this rule, "item" includes:

- (a) an admission;
- (b) a product transferred electronically;
- (c) a service; and
- (d) tangible personal property.

(2)(a) An invoice or receipt issued by a seller shall separately state the sales tax collected on the invoice or receipt.

(b) If an invoice or receipt issued by a seller does not show the sales tax collected as required in Subsection (2)(a), sales tax will be assessed on the seller or purchaser based on the amount of the invoice or receipt.

(3) Unless otherwise provided by statute, if a purchase consists of items that are exempt from sales tax and items that are subject to sales tax, the entire purchase is subject to sales tax unless the seller, at the time of the transaction:

- (a) separately states the tax exempt items on the invoice; or
- (b) is able to identify by reasonable and identifiable standards, from the books and records the seller keeps in the seller's regular course of business, the items exempt from sales tax.

(4) Unless otherwise provided by statute, if a purchase consists of two or more items that are subject to sales tax at different rates, the entire purchase is subject to sales tax at the higher tax rate unless the seller, at the time of the transaction:

- (a) separately states on the invoice the items subject to sales tax at each of the different sales tax rates; or
- (b) is able to identify by reasonable and identifiable standards, from the books and records the seller keeps in the seller's regular course of business, the items subject to sales tax at the lower tax rate.

(5) A seller that collects an excess amount of sales or use tax must either refund the excess to the purchasers from whom the seller collected the excess or remit the excess to the commission.

(a) A seller may offset an undercollection of tax on sales against any excess tax collected in the same reporting period.

(b) A seller may not offset an underpayment of tax on the seller's purchases against an excess of tax collected.

R865-19S-7. Sales Tax License Pursuant to Utah Code Ann. Section 59-12-106.

A.1. A separate sales and use tax license must be obtained for each place of business, but where more than one place of

business is operated by the same person, one application may be filed giving the required information about each place of business.

2. Each license must be posted in a conspicuous place in the place of business for which it is issued.

B. The holder of a license issued under Section 59-12-106 shall notify the commission:

1. of any change of address of the business;
2. of a change of character of the business, or
3. if the license holder ceases to do business.

C. The commission may determine that a person has ceased to do business or has changed that person's business address if:

1. mail is returned as undeliverable as addressed and unable to forward;
2. the person fails to file four consecutive monthly or quarterly sales tax returns, or two consecutive annual sales tax returns;
3. the person fails to renew its annual business license with the Department of Commerce; or
4. the person fails to renew its local business license.

D. If the requirements of C. are met, the commission shall notify the license holder that the license will be considered invalid unless the license holder provides evidence within 15 days that the license should remain valid.

E. A person may request the commission to reopen a sales and use tax license that has been determined invalid under D.

F. The holder of a license issued under Section 59-12-106 shall be responsible for any sales and use tax, interest, and penalties incurred under that license whether those taxes and fees are incurred during the time the license is valid or invalid.

R865-19S-12. Filing of Returns Pursuant to Utah Code Ann. Sections 59-12-107 and 59-12-118.

(1)(a) Every person responsible for the collection of the tax under the act shall file a return with the Tax Commission whether or not sales tax is due.

(b) The return filed by a remote seller under Section 59-12-107(4) shall be the return the seller would have filed if the seller were not a remote seller.

(2) If the due date for a return falls on a Saturday, Sunday, or legal holiday, the return will be considered timely filed if it is received on the next business day.

(3) If a return is transmitted through the United States mail, a legible cancellation mark on the envelope, or the date of registration of certification thereof by a United States post office, is considered the date the return is filed.

(4) Sales and use tax returns shall be filed and paid monthly or quarterly with the following exceptions:

(a) New businesses that expect annual sales and use tax liability less than \$1,000, shall be assigned an annual filing status unless quarterly filing status is requested.

(b)(i) Businesses currently assigned a quarterly filing status, in good standing and reporting less than \$1,000 in tax for the preceding calendar year may be changed to annual filing status.

(ii) The Tax Commission will notify businesses, in writing, if their filing status is changed to annual.

(c)(i) Businesses assigned an annual filing status reporting in excess of \$1,000 for a calendar year, will be changed to quarterly filing status.

(ii) The Tax Commission will notify businesses, in writing, if their filing status is changed to quarterly.

(5) Annual returns are due on January 31 following the calendar year end. The Tax Commission may revoke the annual filing status if sales tax collections are in excess of \$1,000 or as a result of delinquent payment history.

R865-19S-13. Confidential Nature of Returns Pursuant to

Utah Code Ann. Section 59-12-109.

A. The returns filed are confidential and the information contained therein will not be divulged by the Tax Commission, its agents, clerks, or employees except in accordance with judicial order or upon proper application of a federal, state, or local agency. The returns will not be produced in any court proceeding except where such proceeding directly involves provisions of the sales tax act.

B. However, any person or his duly authorized representative who files returns under this act may obtain copies of the same upon proper application and presentation of proper picture identification.

R865-19S-16. Failure to Remit Excess Tax Collection Pursuant to Utah Code Ann. Section 59-12-107.

A. The amount paid by any vendor to the Tax Commission with each return is the greater of:

1. the actual tax collections for the reporting period, or
2. the amount computed at the rates imposed by law against the total taxable sales for that period.

B. Space is available on the return forms for inserting figures and the words "excess collections," if needed.

R865-19S-20. Basis for Reporting Tax Pursuant to Utah Code Ann. Section 59-12-107.

A. "Total sales" means the total amount of all cash, credit, installment, and conditional sales made during the period covered by the return.

B. Amounts shown on returns must include the total sales made during the period of the returns, and the tax must be reported and paid upon that basis.

C. Adjustments may be made and credit allowed for cash discounts, returned goods, and bad debts that result from sales upon which the tax has been reported and paid in full by a seller to the Tax Commission.

1. Adjustments and credits will be allowed only if the seller has not been reimbursed in the full amount of the tax except as noted in C.6.a) and can establish that fact by records, receipts or other means.

2. In no case shall the credit be greater than the sales tax on that portion of the purchase price remaining unpaid at the time the goods are returned, the account is charged off.

3. Any refund or credit given to the purchaser must include the related sales tax.

D. Tax is based upon the original price unless adjustments were made prior to the close of the reporting period in which the tax upon the sale is due. If the price upon which the tax is computed and paid is subsequently adjusted, credit may be taken against the tax due on a subsequent return.

E. If a sales tax rate change takes place prior to the reporting period when the seller claims the credit, the seller must adjust the taxable amount so that the amount of tax credited corresponds proportionally to the amount of tax originally collected.

F. Commissions to agents are not deductible under any conditions for purposes of tax computation.

R865-19S-22. Sales and Use Tax Records Pursuant to Utah Code Ann. Section 59-12-111.

A. Every retailer, lessor, lessee, and person doing business in this state or storing, using, or otherwise consuming in this state tangible personal property purchased from a retailer, shall keep and preserve complete and adequate records as may be necessary to determine the amount of sales and use tax for which such person or entity is liable. Unless the Tax Commission authorizes in writing an alternative method of record keeping, these records shall:

1. show gross receipts from sales, or rental payments from leases, of tangible personal property or services performed in

connection with tangible personal property made in this state, irrespective of whether the retailer regards the receipts to be taxable or nontaxable;

2. show all deductions allowed by law and claimed in filing returns;

3. show bills, invoices or similar evidence of all tangible personal property purchased for sale, consumption, or lease in this state; and

4. include the normal books of account maintained by an ordinarily prudent business person engaged in such business, together with supporting documents of original entry such as: bills, receipts, invoices, and cash register tapes. All schedules or working papers used in connection with the preparation of tax returns must also be maintained.

B. Records may be microfilmed or microfiche. However, microfilm reproductions of general books of account--such as cash books, journals, voucher registers, ledgers, and like documents--are not acceptable as original records. Where microfilm or microfiche reproductions of supporting records are maintained--such as sales invoices, purchase invoices, credit memoranda and like documents--the following conditions must be met:

1. appropriate facilities must be provided for preservation of the films or fiche for the periods required and open to examination,

2. microfilm rolls and microfiche must be systematically filed, indexed, cross referenced, and labeled to show beginning and ending numbers and to show beginning and ending alphabetical listing of documents included,

3. upon request of the Tax Commission, the taxpayer shall provide transcriptions of any information contained on microfilm or microfiche which may be required for verification of tax liability,

4. proper facilities must be provided for the ready inspection and location of the particular records, including machines for viewing and copying the records,

5. a posting reference must appear on each invoice. Credit memoranda must carry a reference to the document evidencing the original transaction. Documents necessary to support exemptions from tax liability, such as bills of lading and purchase orders, must be maintained in such order so as to relate to exempt transactions claimed.

C. Any automated data processing (ADP) tax accounting system must be capable of producing visible and legible records for verification of taxpayer's tax liability.

1. ADP records shall provide an opportunity to trace any transaction back to the original source or forward to a final total. If detailed printouts are not made of transactions at the time they are processed, the systems must have the ability to reconstruct these transactions.

2. A general ledger with source references should be prepared to coincide with financial reports for tax reporting periods. In cases where subsidiary ledgers are used to support the general ledger accounts, the subsidiary ledgers should also be prepared periodically.

3. The audit trail should be designed so that the details underlying the summary accounting data may be identified and made available to the Tax Commission upon request. The system should be so designed that supporting documents--such as sales invoices, purchase invoices, credit memoranda, and like documents--are readily available.

4. A description of the ADP portion of the accounting system shall be made available. The statements and illustrations as to the scope of operations shall be sufficiently detailed to indicate:

- (a) the application being performed;
- (b) the procedures employed in each application (which, for example, might be supported by flow charts, block diagrams or other satisfactory description of the input or output

procedures); and

(c) the controls used to insure accurate and reliable processing and important changes, together with their effective dates, in order to preserve an accurate chronological record.

D. All records pertaining to transactions involving sales or use tax liability shall be preserved for a period of not less than three years.

E. All of the foregoing records shall be made available for examination on request by the Tax Commission or its authorized representatives.

F. Upon failure of the taxpayer, without reasonable cause, to substantially comply with the requirements of this rule, the Tax Commission may:

1. Prohibit the taxpayer from introducing in any protest or refund claim proceeding those microfilm, microfiche, ADP, or any records which have not been prepared and maintained in substantial compliance with the requirements of this rule.

2. Dismiss any protest or refund claim proceeding in which the taxpayer bases its claim upon any microfilm, microfiche, ADP, or any records which have not been prepared and maintained in substantial compliance with the requirements of this rule.

3. Enter such other order necessary to obtain compliance with this rule in the future.

4. Revoke taxpayer's license upon evidence of continued failure to comply with the requirements of this rule.

R865-19S-23. Exemption Certificates Pursuant to Utah Code Ann. Sections 59-12-106 and 59-12-104.

A. Taxpayers selling tangible personal property or services to customers exempt from sales tax are required to keep records verifying the nontaxable status of those sales.

B. The Tax Commission will furnish samples of acceptable exemption certificate forms on request. Stock quantities are not furnished, but taxpayers may reproduce samples as needed in whole or in part.

C. A seller may retain a copy of a purchase order, check, or voucher in place of the exemption certificate as evidence of exemption for a federal, state, or local government entity, including public schools.

D. If a purchaser is unable to segregate tangible personal property or services purchased for resale from tangible personal property or services purchased for the purchaser's own consumption, everything should be purchased tax-free. The purchaser must then report and pay the tax on the cost of goods or services purchased tax-free for resale that the purchaser uses or consumes.

E. A seller may provide evidence of a sales and use tax exemption electronically if the seller uses the standard sales and use tax exemption form adopted by the governing board of the agreement.

F. A seller shall obtain the same information for proof of a claimed exemption regardless of the medium in which the transaction occurs.

R865-19S-25. Sale of Business Pursuant to Utah Code Ann. Section 59-12-112.

A. Every sales tax license holder who discontinues business, is required to notify the Tax Commission immediately and return the sales tax license for cancellation.

B. Every person discontinuing business shall retain records for a period of three years unless a release from such provision is obtained from the Tax Commission.

R865-19S-30. Sale of a Vehicle or Vessel by a Person Not Regularly Engaged in Business Pursuant to Utah Code Ann. Section 59-12-104.

A. This rule provides guidance on the sale of a vehicle or vessel by a person not regularly engaged in business for

purposes of Subsections 59-12-104(13) and (17).

B. For purposes of calculating sales and use tax on the sale of a vehicle where no trade in was involved, the bill of sale or other written evidence of value shall contain the names and addresses of the purchaser and the seller, and the sales price and vehicle identification number of the vehicle.

C. For purposes of calculating sales and use tax on the sale of a vehicle when the seller has received a trade-in vehicle as payment or partial payment, the bill of sale or other written evidence of value shall contain all of the following:

1. the names and addresses of the buyer and the seller;
2. the purchase price of the vehicle;
3. the value allowed for the trade-in vehicle;
4. the net difference between the vehicle traded and the vehicle purchased;
5. the signature of the seller; and
6. the vehicle identification numbers of the vehicle traded in and the vehicle purchased.

D. In the absence of a bill of sale or other written evidence of value, the fair market value of the vehicle or vessel shall be determined by industry accepted vehicle pricing guides.

R865-19S-31. Time and Place of Sale Pursuant to Utah Code Ann. Section 59-12-102.

A. Ordinarily, the time and place of a sale are determined by the contract of sale between the seller and buyer. The intent of the parties is the governing factor in determining both time and place of sale subject to the general law of contracts. If the contract of sale requires the seller to deliver or ship goods to a buyer, title to the property passes upon delivery to the place agreed upon unless the contract of sale provides otherwise.

R865-19S-32. Leases and Rentals Pursuant to Utah Code Ann. Section 59-12-103.

(1)(a) Subject to Subsection (1)(b), a lessor shall compute sales or use tax on all amounts received or charged in connection with a lease or rental of tangible personal property.

(b) Fuel charges in a transaction for the lease or rental of a motor vehicle are not subject to sales tax pursuant to Subsection 59-12-104(1) if the fuel charges are:

- (i) optional; and
- (ii) separately stated on the invoice.

(2) When a lessee has the right to possession, operation, or use of tangible personal property, the tax applies to the amount paid pursuant to the lease agreement, regardless of the duration of the agreement.

(3) Lessors of tangible personal property shall furnish an exemption certificate when purchasing tangible personal property subject to the sales or use tax on rental receipts. Costs of repairs and renovations to tangible personal property are exempt if paid for by the lessor since it is assumed that those costs are recovered by the lessor in his rental receipts.

(4) A person that furnishes tangible personal property along with an operator, as described in the definition of lease or rental in Section 59-12-102, provides a service and shall:

- (a) pay sales and use tax at the time that person purchases the tangible personal property that is furnished under this Subsection (4); and
- (b) collect sales and use tax at the time that person provides the service if the service is subject to sales and use tax.

R865-19S-33. Admissions and User Fees Pursuant to Utah Code Ann. Sections 59-12-102 and 59-12-103.

(1)(a) "Admission" means the right or privilege to enter into a place. Admission includes the amount paid for the right to use a reserved seat or any seat in an auditorium, theater, circus, stadium, schoolhouse, meeting house, or gymnasium to view any type of entertainment. Admission also includes the right to use a table at a night club, hotel, or roof garden whether

such charge is designated as a cover charge, minimum charge, or any such similar charge.

(b) This applies whether the charge made for the use of the seat, table, or similar accommodation is combined with an admission charge to form a single charge, or is separate and distinct from an admission charge, or is the sole charge.

(2) "Annual membership dues paid to a private organization" includes only those dues paid by members who, directly or indirectly, establish the level of the dues.

(3) "Season passes" include amounts paid to participate in specific activities, once annual membership dues have been paid.

(4) If the original admission charge carries the right to remain in a place, or to use a seat or table, or other similar accommodation for a limited time only, and an additional charge is made for an extension of such time, the extra charge is paid for admission within the meaning of the law. Where a person or organization acquires the sole right to use any place or the right to dispose of all of the admissions to any place for one or more occasions, the amount paid is not subject to the tax on admissions. Such a transaction constitutes a rental of the entire place and if the person or organization in turn sells admissions, sales tax applies to amounts paid for such admissions.

(5) Annual membership dues may be paid in installments during the year.

(6) Amounts paid for the following activities are not admissions or user fees:

(a) lessons, public or private;

(b) sign up for amateur athletics if the activity is sponsored by a state governmental entity, or a nonprofit corporation or organization, the primary purpose of which, as stated in the corporation's or organization's articles or bylaws, is the sponsoring, promoting, and encouraging of amateur athletics;

(c) sign up for participation in school activities. Sign up for participation in school activities excludes attendance as a spectator at school activities.

R865-19S-34. Admission to Places of Amusement Pursuant to Utah Code Ann. Section 59-12-103.

(1)(a) The amount paid for admission is subject to sales and use tax, even though that amount includes the right of the purchaser to participate in some activity.

(b) For example, the sale of a ticket for a ride upon a mechanical device is an admission to a place of amusement.

(2)(a) Additional charges for the rental of tangible personal property are subject to sales and use tax as the sale of tangible personal property.

(b) For example:

(i) towel rentals and swimming suit rentals at a swimming pool are subject to sales and use tax;

(ii) locker rental fees at a swimming pool are subject to sales tax if the lockers are tangible personal property.

R865-19S-35. Residential or Commercial Use of Gas, Electricity, Heat, Coal, Fuel Oils or Other Fuels Pursuant to Utah Code Ann. Sections 59-12-103 and 59-12-104.

A. "Residential use" is as defined in Section 59-12-102, and includes use in nursing homes or other similar establishments that serve as the permanent residence for a majority of the patients because they are unable to live independently.

B. Explosives or material used as active ingredients in explosive devices are not fuels.

C. If a firm has activities that are commercial and industrial and all fuels are furnished at given locations through single meters, the predominant use of the fuels shall determine taxable status of the fuels.

D. Fuel oil and other fuels must be used in a combustion process in order to qualify for the exemption from sales tax for

industrial use of fuels pursuant to Section 59-12-104.

R865-19S-37. Exempt Sales of Commercials, Audio Tapes, and Video Tapes by or to Motion Pictures Exhibitors and Distributors Pursuant to Utah Code Ann. Section 59-12-104.

A. The purpose of this rule is to clarify the sales tax exemption for sales of commercials, motion picture films, prerecorded audio program tapes or records, and prerecorded video tapes by a producer, distributor, or studio to a motion picture exhibitor, distributor, or commercial television or radio broadcaster.

B. Definitions.

1. "Commercials," "audio tapes," and "video tapes" mean tapes, films, or discs used by television or radio stations in regular broadcasting activities but do not include blank tapes purchased for newscasts or other similar uses by radio and television stations.

2. "Motion picture exhibitor" means any person engaged in the business of operating a theater or establishment in which motion pictures are regularly exhibited to the public for a charge.

3. "Distributor" means any person who purchases or sells motion picture films and video tapes that are used by a commercial television broadcaster or a motion picture exhibitor.

C. The sales tax exemption will be administered according to the provisions of Section 59-12-104 and this rule.

R865-19S-38. Isolated or Occasional Sales and Use Tax Exemption Pursuant to Utah Code Ann. Section 59-12-104.

(1) "Isolated or occasional sales and use tax exemption" means a sale that qualifies for the sales and use tax exemption for the sale of tangible personal property by a person:

(a) regardless of the number of sales of that tangible personal property by that person; and

(b) not regularly engaged in the business of selling that type of property.

(2)(a) Except as provided in Subsection (2)(b), sales made by officers of a court, pursuant to court orders, qualify for the isolated or occasional sales and use tax exemption.

(b) Sales made by trustees, receivers, or assignees in connection with the liquidation or conduct of a regularly established place of business do not qualify for the isolated or occasional sales and use tax exemption.

(c) Examples of sales made by officers of a court pursuant to court order, that qualify for the isolated or occasional sales and use tax exemption are sales made by sheriffs in foreclosing proceedings and sales of confiscated property.

(3) If a business regularly sells a type of property, sales of that type of property do not qualify for the isolated or occasional sales and use tax exemption, even if the primary purpose of the business is not the sale of that type of property. For example, the sale of repossessed radios or refrigerators by a finance company do not qualify for the isolated or occasional sales and use tax exemption.

(4)(a) Except as provided in Subsection (4)(b), sales of vehicles required to be titled or registered under the laws of this state do not qualify for the isolated or occasional sales and use tax exemption.

(b) The transfer of a vehicle where the ownership of the vehicle before and after the transfer is at least 80 percent the same qualifies for the isolated or occasional sales and use tax exemption.

(5) Sales that qualify for the isolated or occasional sales and use tax exemption include sales that occur as part of:

(a) the reorganization, sale, or liquidation of a business so long as those sales do not include items purchased exempt from sales tax as a sale for resale;

(b) a garage sale if:

(i) the person selling the items at the garage sale is not

regularly engaged in selling that type of property; and

(ii) the items sold at the garage sale were not purchased exempt from sales tax as a sale for resale; and

(c) the sale of business assets that are:

(i) not purchased sales tax exempt by the business as a sale for resale; and

(ii) a type of property not regularly sold by the business.

(6) An example of a sale that qualifies for the sales and use tax exemption under Subsection (5)(a) is a sale, even if it is one of a series of sales, to liquidate the fixtures and equipment of a manufacturing company.

(7) Examples of sales that qualify for the sales and use tax exemption under Subsection (5)(c) include the sale by a:

(a) grocery store of its cash registers, shelves, and fixtures;

(b) law firm of its furniture; and

(c) manufacturer of its used manufacturing equipment.

(8) Sales of items at public auctions generally do not qualify for the isolated or occasional sales and use tax exemption.

R865-19S-40. Exchange of Agricultural Produce For Processed Agricultural Products Pursuant to Utah Code Ann. Section 59-12-102.

A. When a raiser or grower of agricultural products exchanges his produce for a more finished product capable of being made from the produce exchanged with the processor, the more finished product is not subject to the tax within limitations of the value of the raised produce exchanged.

R865-19S-41. Sales to The United States Government and Its Instrumentalities Pursuant to Utah Code Ann. Sections 59-12-104 and 59-12-106.

A. Sales to the United States government are exempt if federal law or the United States Constitution prohibits the collection of sales or use tax.

B. If the United States government pays for merchandise or services with funds held in trust for nonexempt individuals or organizations, sales tax must be charged.

C. Sales made directly to the United States government or any authorized instrumentality thereof are not taxable, provided the sale is paid for directly by the federal government. If an employee of the federal government pays for the purchase with his own funds and is reimbursed by the federal government, that sale is not made to the federal government and does not qualify for the exemption.

D. Vendors making exempt sales to the federal government are subject to the recordkeeping requirements of Tax Commission rule R865-19S-23.

R865-19S-42. Purchases by the State of Utah, Its Institutions, and Its Political Subdivisions Pursuant to Utah Code Ann. Sections 59-12-104 and 59-12-104.6.

(1) "Lodging related purchase" is as defined in Section 59-12-104.6.

(2) A purchase made by the state, its institutions, or its political subdivisions such as counties, municipalities, school districts, drainage districts, irrigation districts, and metropolitan water districts is exempt from tax if the purchase is for use in the exercise of an essential governmental function.

(3) A purchase is considered made by the state, its institutions, or its political subdivisions if the purchase is paid for directly by the purchasing state or local entity. If an employee of a state or local entity pays for a purchase with the employee's own funds and is reimbursed by the state or local entity, that purchase is not made by the state or local entity and does not qualify for the exemption.

(4) An entity that qualifies under Subsections (2) and (3) for an exemption from sales and sales-related tax on a lodging related purchase:

(a) may not receive that exemption at the point of sale; and
(b) may apply for a refund of tax paid on forms provided by the commission.

(5) An entity that applies for a refund of sales and sales-related tax paid under Subsection (4)(b) shall:

(a) retain a copy of a receipt or invoice indicating:

(i) the amount of sales and sales-related tax paid for each purchase for which a refund of tax paid is claimed; and

(ii) the purchase was paid for directly by the entity; and

(b) maintain original records supporting the refund request for three years following the date of the refund and provide those records to the commission upon request.

R865-19S-43. Sales to or by Religious and Charitable Institutions Pursuant to Utah Code Ann. Section 59-12-104.

A. In order to qualify for an exemption from sales tax as a religious or charitable institution, an organization must be recognized by the Internal Revenue Service as exempt from tax under Section 501(c)(3) of the Internal Revenue Code.

B. Religious and charitable institutions must collect sales tax on any sales income arising from unrelated trades or businesses and report that sales tax to the Tax Commission unless the sales are otherwise exempted by law.

1. The definition of the phrase "unrelated trades or businesses" shall be the definition of that phrase in 26 U.S.C.A. Section 513 (West Supp. 1993), which is adopted and incorporated by reference.

C. Every institution claiming exemption from sales tax under this rule must submit form TC-160, Application for Sales Tax Exemption Number for Religious or Charitable Institutions, along with any other information that form requires, to the Tax Commission for its determination. Vendors making sales to institutions exempt from sales tax are subject to the requirements of Rule R865-19S-23.

R865-19S-44. Sales In Interstate Commerce Pursuant to Utah Code Ann. Section 59-12-104.

A. Sales made in interstate commerce are not subject to the sales tax imposed. However, the mere fact that commodities purchased in Utah are transported beyond its boundaries is not enough to constitute the transaction of a sale in interstate commerce. When the commodity is delivered to the buyer in this state, even though the buyer is not a resident of the state and intends to transport the property to a point outside the state, the sale is not in interstate commerce and is subject to tax.

B. Before a sale qualifies as a sale made in interstate commerce, the following must be complied with:

1. the transaction must involve actual and physical movement of the property sold across the state line;

2. such movement must be an essential and not an incidental part of the sale;

3. the seller must be obligated by the express or unavoidable implied terms of the sale, or contract to sell, to make physical delivery of the property across a state boundary line to the buyer;

C. Where delivery is made by the seller to a common carrier for transportation to the buyer outside the state of Utah, the common carrier is deemed to be the agent of the vendor for the purposes of this section regardless of who is responsible for the payment of the freight charges.

D. If property is ordered for delivery in Utah from a person or corporation doing business in Utah, the sale is taxable even though the merchandise is shipped from outside the state to the seller or directly to the buyer.

R865-19S-48. Sales Tax Exemption For Coverings and Containers Pursuant to Utah Code Ann. Section 59-12-104.

A. Sales of containers, labels, bags, shipping cases, and casings are taxable when:

1. sold to the final user or consumer;
2. sold to a manufacturer, processor, wholesaler, or retailer for use as a returnable container that is ordinarily returned to and reused by the manufacturer, processor, wholesaler, or retailer for storing or transporting their product; or
3. sold for internal transportation or accounting control purposes.

B. Returnable containers may include water bottles, carboys, drums, beer kegs for draft beer, dairy product containers, and gas cylinders.

1. Labels used for accounting, pricing, or other control purposes are also subject to tax.

C. For the purpose of this rule, soft drink bottles and similar containers that are ultimately destroyed or retained by the final user or consumer are not considered returnable and are exempt from the tax when purchased by the processor.

D. When tangible personal property sold in containers, for example soft drinks, is assessed a deposit or other container charge, that charge is subject to the tax. Upon refund of this charge, the retailer may take credit on a sales tax return if the tax is refunded to the customer.

R865-19S-49. Sales to and by Farmers and Other Agricultural Producers Pursuant to Utah Code Ann. Section 59-12-104.

(1)(a) For purposes of the sales and use tax exemption for tangible personal property used or consumed primarily and directly in farming operations, a person is engaged in "farming operations" if that person may deduct farm related expenses under Sections 162 or 212, Internal Revenue Code.

(b) To determine whether a person may deduct farm related expenses under Sections 162 or 212 of the Internal Revenue Code, the commission shall consider Treas. Reg. Sections 1.183-1 and 1.183-2.

(2) The purchase of feed, medicine, and veterinary supplies by a farmer or other agricultural producer qualify for the sales and use tax exemption for tangible personal property used or consumed primarily and directly in farming operations if the feed, medicine, or veterinary supplies are used:

- (a) to produce or care for agricultural products that are for sale;
- (b) to feed or care for working dogs and working horses in agricultural use;
- (c) to feed or care for animals that are marketed.
- (3) Fur-bearing animals that are kept for breeding or for their products are agricultural products.
- (4) A vendor making sales to a farmer or other agricultural producer is liable for the tax unless that vendor obtains from the purchaser a certificate as set forth in Rule R865-19S-23.

(5) Poultry, eggs, and dairy products are not seasonal products for purposes of the sales and use tax exemption for the exclusive sale of seasonal crops, seedling plants, or garden, farm, or other agricultural produce sold during the harvest season.

R865-19S-50. Florists Pursuant to Utah Code Ann. Sections 59-12-103 and 59-12-104.

A. Flowers, trees, bouquets, plants, and other similar items of tangible personal property are agricultural products and are, therefore, subject to the rules concerning the sale of those products as set forth in Rule R865-19S-49.

B. Where florists conduct transactions through a florist telegraphic delivery association, the following rules apply in computation of tax liability:

1. the florist must collect tax from the customer if the flower order is telegraphed to a second florist in Utah;
2. if a Utah florist receives an order pursuant to which he gives telegraphic instructions outside Utah, the Utah florist must collect tax from his customer upon the total charges;

3. if a Utah florist receives telegraphic instructions from a florist either within or outside of Utah for the delivery of flowers, the receiving vendor is not liable for the tax. In this instance, if the order originated in Utah, the tax is due from and payable by the Utah florist who first received the order.

R865-19S-51. Fabrication Labor in Connection With Retail Sales of Tangible Personal Property Pursuant to Utah Code Ann. Section 59-12-103.

A. The amount charged for fabrication that is part of the process of creating a finished article of tangible personal property must be included in the amount upon which tax is collected. This type of labor and service charge may not be deducted from the selling price used for taxation purposes even though billed separately to the consumer and regardless of whether the articles are commonly carried in stock or made up on special order.

B. Casting, forging, cutting, drilling, heat treating, surfacing, machining, constructing, and assembling are examples of steps in the process resulting in the creation or production of a finished article.

C. Sale of tangible personal property that is attached to real property, but remains personal property, is subject to sales tax on the retail selling price of the personal property, unless the tangible personal property attached to the real property is exempt from sales and use tax under Section 59-12-104.

D. This rule primarily covers manufacturing and assembling labor. Other rules deal with other types of labor and should be referred to whenever necessary.

R865-19S-53. Sale by Finance Companies Pursuant to Utah Code Ann. Section 59-12-102.

A. Sales of tangible personal property acquired by repossession or foreclosure are subject to tax. Persons making such sales must secure a license and collect and remit tax on the sales made.

R865-19S-56. Sales by Employers to Employees Pursuant to Utah Code Ann. Section 59-12-102.

A. Sales to employees are subject to tax on the amount charged for goods and taxable services. If tangible personal property is given to employees with no charge, the employer is deemed to be the consumer and must pay tax on his cost of the merchandise. Examples of this type of transaction are meals furnished to waitresses and other employees, contest prizes given to salesmen, merchandise bonuses given to clerks, and similar items given away.

R865-19S-57. Ice Pursuant to Utah Code Ann. Sections 59-12-102 and 59-12-103.

A. In general, sales of ice to be used by the purchaser for refrigeration or cooling purposes are taxable. Sales to restaurants, taverns, or the like to be placed in drinks consumed by customers at the place of business are sales for resale and are not taxable.

B. Where ice is sold in fulfillment of a contract for icing or reicing property in transit by railroads or other freight lines, the entire amount of the sale is taxable, and no deduction for services is allowed.

R865-19S-58. Materials and Supplies Sold to Owners, Contractors and Repairmen of Real Property Pursuant to Utah Code Ann. Sections 59-12-102 and 59-12-103.

(1) Sales of construction materials and other items of tangible personal property to real property contractors and repairmen of real property are generally subject to tax if the contractor or repairman converts the materials or items to real property.

- (a) "Construction materials" include items of tangible

personal property such as lumber, bricks, nails and cement that are used to construct buildings, structures or improvements on the land and typically lose their separate identity as personal property once incorporated into the real property.

(b) Fixtures or other items of tangible personal property such as furnaces, built-in air conditioning systems, or other items that are appurtenant to or incorporated into real property and that become an integral part of a real property improvement are treated as construction materials for purposes of this rule.

(2) The sale of real property is not subject to sales tax, nor is the labor performed on real property. For example, the sale of a completed home or building is not subject to the tax, but sales of materials and supplies to contractors for use in building the home or building are taxable transactions as sales to final consumers.

(a) The contractor or repairman who converts the personal property to real property is the consumer of tangible personal property regardless of the type of contract entered into--whether it is a lump sum, time and material, or a cost-plus contract.

(b) Except as otherwise provided in Subsection (2)(d), the contractor or repairman who converts the construction materials, fixtures or other items to real property is the consumer of the personal property whether the contract is performed for an individual, a religious or charitable institution, or a government entity.

(c) Sales of construction materials or fixtures made to religious or charitable institutions are exempt only if the items are sold as tangible personal property.

(d) Sales of materials are considered made to religious or charitable institutions and, therefore, exempt from sales tax, if:

(i) the religious or charitable institution makes payment for the materials directly to the vendor; or

(ii)(A) the materials are purchased on behalf of the religious or charitable institution.

(B) Materials are purchased on behalf of the religious or charitable institution if the materials are clearly identified and segregated and installed or converted to real property owned by the religious or charitable institution.

(e) Purchases not made pursuant to Subsection (2)(d) are assumed to have been made by the contractor and are subject to sales tax.

(3) If the contractor or repairman purchases all materials and supplies from vendors who collect the Utah tax, no sales tax license is required unless the contractor makes direct sales of tangible personal property in addition to the work on real property.

(a) If direct sales are made, the contractor shall obtain a sales tax license and collect tax on all sales of tangible personal property to final consumers.

(b) The contractor must accrue and remit tax on all merchandise bought tax-free and converted to real property. Books and records must be kept to account for both material sold and material consumed.

(4) This rule does not apply to contracts where the retailer sells and installs personal property that does not become part of the real property. Examples of items that remain tangible personal property even when attached to real property are:

(a) moveable items that are attached to real property merely for stability or for an obvious temporary purpose;

(b) manufacturing equipment and machinery and essential accessories appurtenant to the manufacturing equipment and machinery;

(c) items installed for the benefit of the trade or business conducted on the property that are affixed in a manner that facilitates removal without substantial damage to the real property or to the item itself and

(d) telephone or communications equipment and associated wire and lines if the equipment, wire, and lines:

(i) are provided as part of a single transaction;

(ii) that are part of real property are an incidental portion of the transaction;

(iii) are primarily used for the operation of a telephone system or a communications system;

(iv) are installed for the benefit of the trade or business conducted on the property; and

(v) are attached to real property in a manner such that their removal from the real property does not cause substantial damage to the equipment, wire, or lines or to the real property to which they are attached.

R865-19S-59. Sales of Materials and Services to Repairmen Pursuant to Utah Code Ann. Section 59-12-103.

A. Sales of tangible personal property and services to persons engaged in repairing or renovating tangible personal property are for resale, provided the tangible personal property or service becomes a component part of the repair or renovation sold. For example, paint sold to a body and fender shop and used to paint an automobile is exempt from sales tax since it becomes a component part of the repair work.

1. Sandpaper, masking tape, and similar supplies are subject to sales tax when sold to a repairman since these items are consumed by the repairman rather than being sold to his customer as an ingredient part of the repair job. These items shall be taxed at the time of sale if it is known that they are to be consumed. However, if this is not determinable at the time of sale, these items should be purchased tax free, as set forth in Rule R865-19S-23 and sales tax reported on the repairman's sales tax return covering the period during which consumption takes place.

R865-19S-60. Sales of Machinery, Fixtures and Supplies to Manufacturers, Businessmen and Others Pursuant to Utah Code Ann. Section 59-12-103.

A. Unless specifically exempted by statute, sales of machinery, tools, equipment, and supplies to a manufacturer or producer are taxable.

B. Sales of furniture, supplies, stationery, equipment, appliances, tools, and instruments to stores, shops, businesses, establishments, offices, and professional people for use in carrying on their business and professional activities are taxable.

C. Sales of trade fixtures to a business owner are taxable as sales of tangible personal property even if the fixtures are temporarily attached to real property.

1. Trade fixtures are items of tangible personal property used for the benefit of the business conducted on the property.

2. Trade fixtures tend to be transient in nature in that the fixtures installed in a commercial building may vary from one tenant to the next without substantial alteration of the building, and the building itself is readily adaptable to multiple uses.

3. Examples of trade fixtures include cases, shelves and racks used to store or display merchandise.

D. Sales described in A. through C. of this rule are sales to final buyers or ultimate consumers and therefore not sales for resale.

R865-19S-61. Meals Furnished Pursuant to Utah Code Ann. Sections 59-12-103 and 59-12-104.

A. The following definitions apply to the sales and use tax exemption authorized under Section 59-12-104 for inpatient meals provided at a medical facility or nursing facility.

1. "Medical facility" means a facility:

a) described in SIC codes 8062 through 8069 of the 1987 Standard Industrial Classification Manual of the federal Executive Office of the President, Office of Management and Budget; and

b) licensed under Section 26-21-8.

2. "Nursing facility" means a facility:

a) described in SIC codes 8051 through 8059 of the 1987

Standard Industrial Classification Manual of the federal Executive Office of the President, Office of Management and Budget; and

b) licensed under Section 26-21-8.

B. The following definition applies to the sales and use tax exemption authorized under Section 59-12-104 for sales of meals served by an institution of higher education.

1. "Student meal plan" means an arrangement:

a) between an institution of higher education and a student;

b) available only to a student;

c) whose duration is the entire term, semester, or similar unit of study;

d) paid in advance of the term, semester, or similar unit of study; and

e) providing for specified meals at eating facilities of the institution of higher education.

C. Except as provided in Section 59-12-104, sales and use tax is imposed upon the amount paid for meals furnished by any restaurant, cafeteria, eating house, hotel, drug store, diner, private club, boarding house, or other place, regardless of whether meals are regularly served to the public.

D. Ingredients that become a component part of meals subject to tax are construed to be purchased for resale, and as such the purchase of those ingredients is exempt from sales and use tax.

E. Where a meal is given away on a complementary basis, the provider of the meal is considered to be the consumer of the items used in preparing the meal.

F. Meals served by religious or charitable institutions and institutions of higher education are not available to the general public if:

1. access to the restaurant, cafeteria, or other facility is restricted to:

a) in the case of a religious or charitable institution:

(1) employees of the institution;

(2) volunteers of the institution;

(3) guests of the institution; and

(4) other individuals that constitute a limited class of

people; or

b) in the case of an institution of higher education:

(1) students of the institution;

(2) employees of the institution;

(3) guests of the institution; and

(4) other individuals that constitute a limited class of

people; and

2. the restricted access is enforced.

G. Sales of meals at occasional church or charity bazaars or fund raisers, and other similar functions are considered isolated and occasional sales and therefore exempt from sales and use tax.

R865-19S-62. Meal Tickets, Coupon Books, and Merchandise Cards Pursuant to Utah Code Ann. Section 59-12-103.

A. Meal tickets, coupon books, or merchandise cards sold by persons engaged in selling taxable commodities or services are taxable, and the tax shall be billed or collected on the selling price at the time the tickets, books, or cards are sold. Tax is to be added at the subsequent selection and delivery of the merchandise or services if an additional charge is made.

R865-19S-63. Sales of Memorial Markers Pursuant to Utah Code Ann. Section 59-12-103.

A. Sales of tombstones and grave markers, which are embedded in sod or a concrete foundation, are considered to be improvements to real property. If the seller furnishes and installs the marker, tax applies to his cost of the marker and to his cost of installation material. If the seller does not install the

marker, the transaction is a sale of tangible personal property and the seller must collect tax on the full selling price, including cutting, shaping, lettering, and polishing.

R865-19S-65. Newspapers Pursuant to Utah Code Ann. Section 59-12-103.

A. "Newspaper" means a publication that appears to be a newspaper in the general or common sense. In addition, the publication:

1. must be published at short intervals, daily, or weekly;

2. must not, when its successive issues are put together, constitute a book;

3. must be intended for circulation among the general public; and

4. must contain matters of general interest and report on current events.

B. Purchases of tangible personal property by a newspaper publisher are subject to sales and use tax if the property will be used or consumed in the printing or distribution of the newspaper.

C. A newspaper publisher may purchase tax free for resale any tangible personal property that becomes a component part of the newspaper.

1. Examples of tangible personal property that becomes a component part of the newspaper include newsprint, ink, staples, plastic or paper protective coverings, and rubber bands distributed with the newspaper.

D. Purchases of advertising inserts that will be distributed with a newspaper are exempt from sales and use tax if the inserts are identified with the name and date of distribution of the newspaper. The identification may include a multiple listing of all newspapers that will carry the insert and the corresponding distribution dates.

1. Advertising inserts that are not identified as provided in D. are exempt from sales and use tax if the newspaper maintains a log at its place of business that lists by date and name the inserts included in each publication. The log may reflect all inserts or only the inserts not otherwise identified with the newspaper in accordance with D.

R865-19S-66. Optometrists, Opticians, and Ophthalmologists Pursuant to Utah Code Ann. Section 59-12-103.

A. Optometrists and ophthalmologists are deemed to be persons engaged primarily in rendering personal services. These services consist of the examination and treatment of eyes. Glasses, contact lenses, or other tangible personal property such as sunglasses, or cleaning solutions sold by optometrists and ophthalmologists are taxable and tax must be collected from the patient or buyer. Invoices or receipts must show the charges for personal services separate from the charges for tangible personal property and the sales tax thereon. If an optometrist or ophthalmologist does not provide separate charges for personal services and sales of tangible personal property, sales tax shall be charged on the entire amount.

B. All sales of tangible personal property to optometrists or ophthalmologists for use or consumption in connection with their services are subject to sales or use tax.

C. Opticians are makers of or dealers in optical items and instruments and fill prescriptions written by optometrists and ophthalmologists. Opticians are engaged in the business of selling tangible personal property and personal services rendered by them are considered as merely incidental thereto. Opticians are required to collect the sales tax on all their sales of tangible personal property.

R865-19S-68. Premiums, Gifts, Rebates, and Coupons Pursuant to Utah Code Ann. Sections 59-12-102 and 59-12-103.

A. Donors that give away items of tangible personal property as premiums or otherwise are regarded as the users or consumers of those items and the sale to the donor is a taxable sale. Exceptions to this treatment are items of tangible personal property donated to or provided for use by exempt organizations that would qualify for exemption under R865-19S-43 or R865-19S-54 if a sale of such items were made to them. An item given away as a sales incentive is exempt to the donor if the sale of that item would have been exempt. An example is prescribed medicine given away by a drug manufacturer.

B. When a retailer making a retail sale of tangible personal property that is subject to tax gives a premium together with the tangible personal property sold, the transaction is regarded as a sale of both articles to the purchaser, provided the delivery of the premium is certain and does not depend upon chance.

C. Where a retailer is engaged in selling tangible personal property that is not subject to tax and furnishes a premium with the property sold, the retailer is the consumer of the premium furnished.

D. If a retailer accepts a coupon for part or total payment for a taxable product and is reimbursed by a manufacturer or another party, the total sales value, including the coupon amount, is subject to sales tax.

E. A coupon for which no reimbursement is received is considered to be a discount and the taxable amount is the net amount paid by the customer after deducting the value of the coupon.

F. If a retailer agrees to furnish a free item in conjunction with the sale of an item, the sales tax applies only to the net amount due. If sales tax is computed on both items and only the sales value of the free item is deducted from the bill, excess collection of sales tax results. The vendor is then required to follow the procedure outlined in R865-19S-16 and remit any excess sales tax collected.

G. Any coupon with a fixed price limit must be deducted from the total bill and sales tax computed on the difference. For example, if a coupon is redeemed for two \$6 meals, but the value of the free meal is limited to \$5, the \$12 is rung up and the \$5 deducted, resulting in a taxable sale of \$7.

R865-19S-70. Sales Incidental To The Rendition of Services Pursuant to Utah Code Ann. Sections 59-12-103 and 59-12-104.

A. Persons engaged in occupations and professions that primarily involve the rendition of services upon the client's person and incidentally dispense items of tangible personal property are regarded as the consumers of the tangible personal property dispensed with the services.

B. Physicians, dentists, beauticians, and barbers are examples of persons described in A.

R865-19S-72. Trade-ins and Exchanges Pursuant to Utah Code Ann. Section 59-12-102.

A. An even exchange of tangible personal property for tangible personal property is exempt from tax. When a person takes tangible personal property as part payment on a sale of tangible personal property, sales or use tax applies only to any consideration valued in money which changes hands.

B. For example, if a car is sold for \$8,500 and a credit of \$6,500 is allowed for a used car taken in trade, the sales or use tax applies to the difference, or \$2,000 in this example. Subsequently, when the used car is sold, tax applies to the selling price less any trade-in at that time.

C. An actual exchange of tangible personal properties between two persons must be made before the exemption applies. For example, there is no exchange if a person sells his car to a dealer and the dealer holds the credit to apply on a purchase at a later date; there are two separate transactions, and tax applies to the full amount of the subsequent purchase if and

when it takes place.

R865-19S-73. Trustees, Receivers, Executors, Administrators, Etc. Pursuant to Utah Code Ann. Section 59-12-103.

A. Trustees, receivers, assignees, executors, and administrators, who -- by virtue of their appointment -- operate, manage, or control a business making taxable sales or leases of tangible personal property, or performing taxable services, must collect and remit sales tax on the total taxable sales even though such sales are made in liquidation.

R865-19S-74. Vending Machines Pursuant to Utah Code Ann. Section 59-12-104.

A. Persons operating vending machines are deemed to be retailers and selling articles of tangible personal property. The total sales from vending machine operations are considered the total selling price of the tangible personal property distributed in connection with their operations and must be reported as the amount of sales subject to tax.

B. Persons operating vending machines selling food, beverages, and dairy products in which the proceeds of each sale do not exceed \$1, and who do not report an amount equal to 150% of the cost of items as goods consumed, are subject to the requirements of A.

C. For purposes of the 150% of cost formula in Section 59-12-104(3), "cost" is defined as follows.

1. In the case of retailers, cost is the total purchase price paid for products, including any packaging and incoming freight.

2. In the case of a manufacturer, cost includes the following items:

a) acquisition costs of materials and packaging, including freight;

b) direct manufacturing labor; and

c) utility expenses, if a sales tax exemption has been granted on utility purchases.

D. Operators of vending machines, if they so desire, may divide the tax out and sell items at fractional parts of a cent, providing their records so indicate.

E. Where machines vending taxable items are owned by persons other than the proprietor of a place of business in which the machine is placed and the person owning the machine has control over the sales made by the machine, evidenced by collection of the money, the owner is required to secure a sales tax license. One license is sufficient for all such machines. A statement in substantially the following form must be conspicuously affixed upon each vending machine:

"This machine is operated under Utah Sales Tax License No. "

R865-19S-75. Sales by Photographers, Photo Finishers, and Photostat Producers and Engravers Pursuant to Utah Code Ann. Section 59-12-103.

A. Photographers, photofinishers, and photostat producers are engaged in selling tangible personal property and rendering services such as developing, retouching, tinting, or coloring photographs belonging to others.

1. Persons described in this rule must collect tax on all of the above services and on all sales of tangible personal property, such as films, frames, cameras, prints, etc.

B. Sales of tangible personal property by photoengravers, electrotypers, and wood engravers to printers, advertisers, or other persons who do not resell such property but use or consume it in the process of producing printed matter are taxable sales. The value or worth of the services or processing which go into their production is of no moment, and it is immaterial that each sale is upon a special order for a particular customer.

1. Electrotypes and engravings are manufactured articles of merchandise and are sold as such and not as a service. No deduction is allowed on account of the cost of the property sold, labor, service, or any other expense.

R865-19S-76. Painters, Polishers, and Car Washers Pursuant to Utah Code Ann. Sections 59-12-103 and 59-12-104.

(1) Sales of paint, wax, or other material to persons engaged in the business of painting and polishing of tangible personal property are exempt as sales for resale if the paint, wax, or other material becomes a part of the customer's tangible personal property. However, the vendor of these items must be given a resale certificate as provided for in Rule R865-19S-23.

(2) Sales of soap, washing mitts, polishing cloths, spray equipment, sand paper, and similar items to painters, polishers, and car washes are sales to the final consumer and are subject to tax.

R865-19S-78. Service Plan Charges for Labor and Repair Pursuant to Utah Code Ann. Sections 59-12-103 and 59-12-104.

(1) "Service plan" includes an extended warranty agreement or other prepaid arrangement.

(2)(a) Service plan charges for a future taxable repair are subject to sales tax.

(b) Sales tax must also be collected on any deductible charged to a customer for the customer's share of the repair done under the service plan.

(3)(a) Service plan charges for items of tangible personal property that are converted to real property are not taxable.

(b) Service plan charges for items of tangible personal property that are permanently attached to real property are treated as follows:

(i) service plan charges for labor are not taxable; and

(ii) service plan charges for parts are taxable unless those parts are exempt under Title 59, Chapter 12, Part 1, Tax Collection.

(4) Rule R865-19S-58 outlines the sales tax responsibility of a person that converts tangible personal property to real property.

R865-19S-79. Tourist Home, Hotel, Motel, or Trailer Court Accommodations and Services Defined Pursuant to Utah Code Ann. Sections 59-12-103, 59-12-301, 59-12-352, and 59-12-353.

A. The following definitions shall be used for purposes of administering the sales tax on accommodations and transient room taxes provided for in Sections 59-12-103, 59-12-301, 59-12-352, and 59-12-353.

1. "Tourist home," "hotel," or "motel" means any place having rooms, apartments, or units to rent by the day, week, or month.

2. "Trailer court" means any place having trailers or space to park a trailer for rent by the day, week, or month.

3. "Trailer" means house trailer, travel trailer, and tent trailer.

4. "Accommodations and services charges" means any charge made for the room, apartment, unit, trailer, or space to park a trailer, and includes charges made for local telephone, electricity, propane gas, or similar services.

R865-19S-80. Printers' Purchases and Sales Pursuant to Utah Code Ann. Section 59-12-103.

(1) Definitions.

(a)(i) "Pre-press materials" means materials that:

(B) are reusable;

(C) are used in the production of printed matter;

(D) do not become part of the final printed matter; and

(E) are sold to the customer.

(ii) Pre-press materials include film, magnetic media, compact disks, typesetting paper, and printing plates.

(b)(i) "Printer" means a person that reproduces multiple copies of images, regardless of the process employed or the name by which that person is designated.

(ii) A printer includes a person that employs the processes of letterpress, offset, lithography, gravure, engraving, duplicating, silk screen, bindery, or lettership.

(2) Purchases by a printer.

(a)(i) Purchases of tangible personal property by a printer are subject to sales and use tax if the property will be used or consumed by the printer.

(ii) Examples of tangible personal property used or consumed by the printer include conditioners, solvents, developers, and cleaning agents.

(b)(i) A printer may purchase tax free for resale any tangible personal property that becomes a component part of the finished goods for resale.

(ii) Examples of tangible personal property that becomes a component part of the finished goods for resale include glue, stitcher wire, paper, and ink.

(c) A printer may purchase pre-press materials tax free if the printer's invoice, or other written material provided to the purchaser, states that reusable pre-press materials are included with the purchase. A description and the quantity of the actual items used in the order is not necessary. The statement must not restrict the customer from taking physical possession of the pre-press materials.

(d) The tax treatment of a printer's purchase of graphic design services shall be determined in accordance with rule R865-19S-111.

(3) Sales by a printer.

(a) Except as provided in this Subsection (3), a printer shall collect sales and use tax on the following:

(i) charges for printed material, even though the paper may be furnished by the customer;

(ii) charges for envelopes;

(iii) charges for services performed in connection with the printing or the sale of printed matter, such as cutting, folding, and binding;

(iv) charges for pre-press materials purchased tax exempt by the printer; and

(v) charges for reprints and proofs.

(b) Charges for postage are not subject to sales and use tax.

(c) Sales by a printer are exempt from sales and use tax if:

(i) the sale qualifies for exemption under Section 59-12-104; and

(ii) the printer obtains from the purchaser a certificate as set forth in rule R865-19S-23.

(d) If the printer's customer is purchasing printed material for resale, but will not resell the pre-press materials, the printer must collect sales and use tax on the pre-press materials.

(e) If printed material is shipped outside of the state, charges for pre-press materials are exempt from sales tax as a sale of goods sold in interstate commerce only if the pre-press materials are physically shipped out of state with the printed material. If pre-press materials are retained in the state by the printer for any reason, the pre-press materials do not qualify for the sales tax exemption for goods sold in interstate commerce, and as such, the printer must collect sales tax on the part of the transaction relating to the pre-press materials.

R865-19S-81. Sale of Art Pursuant to Utah Code Ann. Section 59-12-103.

A. Art dealers and artists selling paintings, drawings, etchings, statues, figurines, etc., to final consumers must collect tax, whether an object is sold from an inventory or is created

upon special order. The value or worth of the services to produce the art object are an integral part of the value of the tangible personal property upon completion and no deduction for such services may be made in determining the amount which is subject to tax.

B. Paints, canvases, frames, sculpture ingredients, and items becoming part of the finished product may be purchased tax-free if used in a painting or other work of art for resale.

1. Brushes, easels, tools, and similar items are consumed by the artist, and tax must be paid on the purchase of these items.

R865-19S-82. Demonstration, Display, and Trial Pursuant to Utah Code Ann. Section 59-12-104.

A. Tangible personal property purchased by a wholesaler or a retailer and held for display, demonstration or trial in the regular course of business is not subject to tax.

Examples of this are a desk bought by an office supply firm and placed in a window display, or an automobile purchased by an auto dealer and assigned to a salesman as a demonstrator. Sales tax applies to any rental charges made to the salesman for use of a demonstrator.

B. Sales tax applies to these charges even though all or part of the charge may be waived if such waiver is dependent upon the salesman performing certain services or reaching a certain sales quota or some similar contingency.

C. Sales tax applies to items purchased primarily for company or personal use and only casually used for demonstration purposes.

1. For example, wreckers or service trucks used by a parts department, are subject to tax even though they are demonstrated occasionally. Also, automobiles assigned to nonsales personnel such as a service manager, an office manager, an accountant, an officer's spouse, or a lawyer are subject to tax.

a. For motor vehicle dealers using certain vehicles withdrawn from inventory for periods not exceeding one year, the tax liability is deemed satisfied if the dealer remits sales or use tax on each such vehicle based on its lease value while so used.

(1) Only motor vehicles provided or assigned to company personnel or to exempt entities qualify for this treatment. For vehicles donated to religious, charitable, or government institutions, see Rule R865-19S-68.

(2) The monthly lease value is the manufacturer's invoice price to the dealer, divided by 60.

(3) Records must be maintained to show when each vehicle is placed in use, to whom assigned or provided, lease value computation, tax remitted, when removed from service and when returned to inventory for resale.

(4) Vehicles used for periods exceeding one year are subject to tax on the dealer's acquisition cost.

2. An exception is an item held for resale in the regular course of business and used for demonstration a substantial amount of time. Records must be maintained to show the manner of demonstration involved if exemption is claimed.

D. Normally, vehicles will not be allowed as demonstrators if they are used beyond the new model year by a new-car dealer or if used for more than six months by a used-car dealer.

1. Tax will apply if these conditions are not met, unless it is shown that these guidelines are not applicable in a given instance. In this case consideration will be given to the circumstances surrounding the need for a demonstrator for a longer period of time.

R865-19S-85. Sales and Use Tax Exemptions for Certain Purchases by a Manufacturing Facility Pursuant to Utah Code Ann. Section 59-12-104.

(1) Definitions:

(a) "Establishment" means an economic unit of operations, that is generally at a single physical location in Utah, where qualifying manufacturing processes are performed. If a business operates in more than one location (e.g., branch or satellite offices), each physical location is considered separately from any other locations operated by the same business.

(b) "Machinery and equipment" means:

(i) electronic or mechanical devices incorporated into a manufacturing process from the initial stage where actual processing begins, through the completion of the finished end product, and including final processing, finishing, or packaging of articles sold as tangible personal property. This definition includes automated material handling and storage devices when those devices are part of the integrated continuous production cycle; and

(ii) any accessory that is essential to a continuous manufacturing process. Accessories essential to a continuous manufacturing process include:

(A) bits, jigs, molds, or devices that control the operation of machinery and equipment; and

(B) gas, water, electricity, or other similar supply lines installed for the operation of the manufacturing equipment, but only if the primary use of the supply line is for the operation of the manufacturing equipment.

(c) "Manufacturer" means a person who functions within a manufacturing facility.

(2) The sales and use tax exemption for the purchase or lease of machinery and equipment by a manufacturing facility applies only to purchases or leases of tangible personal property used in the actual manufacturing process.

(a) The exemptions do not apply to purchases of items of tangible personal property that become part of the real property in which the manufacturing operation is conducted.

(b) Purchases of qualifying machinery and equipment are treated as purchases of tangible personal property under R865-19S-58, even if the item is affixed to real property upon installation.

(3) Machinery and equipment used for a nonmanufacturing activity qualify for the exemption if the machinery and equipment are primarily used in manufacturing activities. Examples of nonmanufacturing activities include:

(a) research and development;

(b) refrigerated or other storage of raw materials, component parts, or finished product; or

(c) shipment of the finished product.

(4) Where manufacturing activities and nonmanufacturing activities are performed at a single physical location, machinery and equipment purchased for use in the manufacturing operation are eligible for the sales and use tax exemption if the manufacturing operation constitutes a separate and distinct manufacturing establishment.

(a) Each activity is treated as a separate and distinct establishment if:

(i) no single SIC code includes those activities combined; or

(ii) each activity comprises a separate legal entity.

(b) Machinery and equipment used in both manufacturing activities and nonmanufacturing activities qualify for the exemption only if the machinery and equipment are primarily used in manufacturing activities.

(5) The manufacturer shall retain records to support the claim that the machinery and equipment are qualified for exemption from sales and use tax under the provisions of this rule and Section 59-12-104.

R865-19S-86. Monthly Payment of Sales Taxes Pursuant to Utah Code Ann. Section 59-12-108.

A. Definitions:

1. "Cash equivalent" means either:

- cash;
- wire transfer; or
- cashier's check drawn on the bank in which the Tax Commission deposits sales tax receipts.

2. "Fiscal year" means the year commencing on July 1 and ending the following June 30.

3. "Mandatory filer" means a seller that meets the threshold requirements for monthly filing and remittance of sales taxes or for electronic funds transfer (EFT) remittance of sales taxes.

4. For purposes of the monthly filing and the electronic remittance of sales taxes, the term "tax liability for the previous year" means the tax liability for the previous calendar year.

B. The determination that a seller is a mandatory filer shall be made by the Tax Commission at the end of each calendar year and shall be effective for the fiscal year.

C. A seller that meets the qualifications for a mandatory filer but does not receive notification from the Tax Commission to that effect, is not excused from the requirements of monthly filing and remittance or EFT remittance.

D. Mandatory filers shall also file and remit any waste tire fees and transient room, resort communities, and tourism, recreation, cultural, and convention facilities taxes to the commission on a monthly basis or by EFT, respectively.

E. Sellers that are not mandatory filers may elect to file and remit their sales taxes to the commission on a monthly basis, or remit sales taxes by EFT, or both.

1. The election to file and remit sales taxes on a monthly basis or to remit sales taxes by EFT is effective for the immediate fiscal year and every fiscal year thereafter unless the Tax Commission receives written notification prior to the commencement of a fiscal year that the seller no longer elects to file and remit sales taxes on a monthly basis, or to remit sales taxes by EFT, respectively.

2. Sellers that elect to file and remit sales taxes on a monthly basis, or to remit sales taxes by EFT, are subject to the same requirements and penalties as mandatory filers.

F. Sellers that are mandatory filers may request deletion of their mandatory filer designation if they do not expect to accumulate a \$50,000 sales tax liability for the current calendar year.

1. The request must be accompanied by documentation clearly evidencing that the business that led to the \$50,000 tax liability for the previous year will not recur.

2. The request must be made prior to the commencement of a fiscal year.

3. If a seller's request is approved and the seller does accumulate a \$50,000 sales tax liability, a similar request by that seller the following year shall be denied.

G. Sellers that are required to remit sales tax by EFT may, following approval by the Tax Commission, remit a cash equivalent in lieu of the EFT.

1. Approval for remittance by cash equivalent shall be limited to those sellers that are able to establish that remittance by EFT would cause a hardship to their organization.

2. Requests for approval shall be directed to the Deputy Executive Director of the Tax Commission.

3. Sellers that receive approval to remit their sales taxes by cash equivalent shall ensure that the cash equivalent is received at the Tax Commission's main office no later than three working days prior to the due date of the sales tax.

H. Sellers that are required to remit sales taxes by EFT, but remit these taxes by some means other than EFT or a Tax Commission approved cash equivalent, are not entitled to reimbursement for the cost of collecting and remitting sales taxes and are subject to penalties.

I. Prior to remittance of sales taxes by EFT, a vendor shall complete an EFT agreement with the Tax Commission. The

EFT Agreement shall indicate that all EFT payments shall be made in one of the following manners.

1. Except as provided in I.2., sellers shall remit their EFT payment by an ACH-debit transaction through the National Automated Clearing House Association (NACHA) system CCD application.

2. If an organization's bylaws prohibit third party access to its bank account or extenuating circumstances exist, a seller may remit its EFT payment by an ACH-credit with tax payment addendum transaction through the NACHA system CCD Plus application.

J. In unusual circumstances, a particular EFT payment may be accomplished in a manner other than that specified in I. Use of any manner of remittance other than that specified in I. must be approved by the Tax Commission prior to its use.

K. If a seller that is required to remit sales taxes by EFT is unable to remit a payment of sales taxes by EFT because the system for remitting payments by EFT fails, the seller may remit its sales taxes by cash equivalent. A seller shall notify the Waivers Unit of the Tax Commission if this condition arises.

R865-19S-87. Government-Owned Tooling and Equipment Exemption Pursuant to Utah Code Ann. Section 59-12-104.

The following definitions apply to the sales and use tax exemption for sales of certain tooling, special tooling, support equipment, and special test equipment.

(1) "Tooling" means jigs, dies, fixtures, molds, patterns, taps, gauges, test equipment, other equipment, and other similar manufacturing aids generally available as stock items.

(2) "Special Tooling" means jigs, dies, fixtures, molds, patterns, taps, gauges, other equipment and manufacturing aids, and all components of these items that are of such a specialized nature that without substantial modification or alteration their use is limited to the development or production of particular supplies or parts thereof or performing particular services.

(3) "Support equipment" means implements or devices that are required to inspect, test, service, adjust, calibrate, appraise, transport, safeguard, record, gauge, measure, repair, overhaul, assemble, disassemble, handle, store, actuate or otherwise maintain the intended functional operation status of an aerospace electronic system.

(4) "Special test equipment" means either single or multipurpose integrated test units engineered, designed, fabricated, or modified to accomplish special purpose testing in performing a contract. These testing units may be electrical, electronic, hydraulic, pneumatic, or mechanical. Or they may be items or assemblies of equipment that are mechanically, electrically, or electronically interconnected so as to become a new functional entity, causing the individual item or items to become interdependent and essential in performing special purpose testing in the development or production of peculiar supplies or services.

R865-19S-90. Telecommunications Service Pursuant to Utah Code Ann. Section 59-12-103.

(1) Taxable telecommunications service charges include subscriber access fees.

(2) Nontaxable telecommunications charges include:

(a) refundable subscriber deposits, interest, and late payment penalties;

(b) charges for interstate calls;

(c) telecommunications answering services received or relayed by a human operator;

(d) charges to repair subscriber equipment that is regarded as real property; and

(e) charges levied on subscribers to fund or subsidize special telecommunications services, including 911 service, special communications services for the deaf, and special telecommunications service for low income subscribers.

R865-19S-91. Sales of Tangible Personal Property to Government Project Managers and Supply Contractors Pursuant to Utah Code Ann. Sections 59-12-102, 59-12-103, and 59-12-104.

A. Sales of tangible personal property or services as defined in Sections 59-12-102 and 59-12-103 to federal, state, or municipal government facilities managers or supply contractors, who are not employees or agents of that government entity, are subject to sales or use tax if the manager or contractor uses or consumes the property. Tax is due even though a contract vests title in the government.

B. A person qualifies as an agent for purchasing on behalf of a government entity if the person and the government entity enter into a contract that includes the following conditions:

1. The person is officially designated as the government entity's purchasing agent by resolution of the government entity;
2. The person identifies himself as a purchasing agent for the government entity;
3. The purchase is made on purchase orders that indicate the purchase is made by or on behalf of the government entity and the government entity is responsible for the purchase price;
4. The transaction is approved by the government entity; and
5. Title passes directly to the government entity upon purchase.

C. If the government entity makes a direct payment to the vendor for the tangible personal property or services, the sale is made to the government entity and not to the facilities manager or the supply contractor. In that case, the sale is not subject to sales tax.

D. Certain purchases made by aerospace or electronic industry contractors dealing with the United States are exempted by Section 59-12-104(15) and further covered by R865-19S-87. Therefore, these industry purchases are not covered by this rule.

R865-19S-92. Computer Software and Other Related Transactions Pursuant to Utah Code Ann. Sections 59-12-103 and 59-12-211.

(1) "Computer-generated output" means the microfiche, microfilm, paper, discs, tapes, molds, or other tangible personal property generated by a computer.

(2) The sale, rental or lease of custom computer software constitutes a sale of personal services and is exempt from the sales or use tax, regardless of the form in which the software is purchased or transferred. Charges for services such as software maintenance, consultation in connection with a sale or lease, enhancements, or upgrading of custom software are not taxable.

(3) The sale of computer generated output is subject to the sales or use tax if the primary object of the sale is the output and not the services rendered in producing the output.

(4)(a) The provisions for determining the location of a transaction under Subsection (4)(b) apply if:

- (i) a purchaser uses computer software;
- (ii) there is not a transfer of a copy of the computer software to the purchaser; and
- (iii) the purchaser uses the computer software at more than one location.

(b) The location of a transaction described in Subsection (4)(a) is:

(i) if the seller is required to collect and remit tax to the commission for the purchase, and the purchaser provides the seller at the time of purchase a reasonable and consistent method for allocating the purchase to multiple locations, the location determined by applying that reasonable and consistent method of allocation; or

(ii) if the seller is required to collect and remit tax to the commission for the purchase, and the seller does not receive information described in Subsection (4)(b)(i) from the purchaser at the time of the purchase, the location determined in

accordance with Subsections 59-12-211(4) and (5); or

(iii) if the purchaser accrues and remits sales tax to the commission for the purchase, the location determined:

(A) by applying a reasonable and consistent method of allocation; or

(B) in accordance with Subsections 59-12-211(4) and (5).

R865-19S-93. Waste Tire Recycling Fee Pursuant to Utah Code Ann. Section 19-6-808.

A. The waste tire recycling fee shall be paid by the retailer to the State Tax Commission at the same time and in the same manner as sales and use tax returns are filed. The sales tax account number will also be the recycling fee account number. A separate return form will be provided.

1. The tire recycling fee will be imposed at the same time the sales tax is imposed. For example, if tires are purchased for resale either as part of a vehicle sale or to be sold separately by a vehicle dealer, the recycling fee and the sales tax would be collected by the dealer at the time the vehicle is sold. If sales tax is paid to a tire retailer by a vehicle dealer when tires are purchased, the recycling fee will also be paid by the vehicle dealer to the tire retailer.

2. Where tires are sold to entities exempt from sales tax, the exempt entity must still pay the recycling fee.

B. The recycling fee is not considered part of the sales price of the tire and is not subject to sales or use tax.

C. Wholesalers purchasing tires for resale are not subject to the fee.

D. Tires sold and delivered out of state are not subject to the fee.

E. Tires purchased from out of state vendors are subject to the fee. The fee must be reported and paid directly to the Tax Commission in conjunction with the use tax.

R865-19S-94. Service Charges, Tips, Gratuities, Cover Charges, and Other Similar Charges Pursuant to Utah Code Ann. Section 59-12-103.

(1)(a) Restaurants, cafes, clubs, private clubs, and similar businesses must collect sales tax on service charges, tips, gratuities, cover charges, or other similar charges included on a patron's bill that are required to be paid.

(b) Voluntary amounts left on the table or added to a credit card charge slip are not subject to sales tax.

(2) A service charge, tip, gratuity, cover charge, or other similar charge that a restaurant, cafe, club, private club, or similar business includes on a patron's bill is presumed to be required unless:

(a) language on the front of the bill states that the service charge, tip, gratuity, cover charge, or other similar charge is voluntary and may be increased or decreased by the patron; and

(b) the language described in Subsection (2)(a) is in the same font size as the service charge, tip, gratuity, cover charge, or other similar charge that the restaurant, cafe, club, private club, or similar business included on the bill.

(3) Charges to enter a restaurant, tavern, club or similar facility are taxable as an admission to a place of recreation, amusement or entertainment.

R865-19S-96. Transient Room Tax Collection Pursuant to Utah Code Ann. Sections 59-12-103 and 59-12-301.

A. Utah Code Ann. Section 59-12-301 authorizes any board of county commissioners to impose a transient room tax. The transient room tax shall be charged in addition to sales tax authorized in 59-12-103(1)(i).

B. The transient room tax shall be charged on the rental price of any motor court, motel, hotel, inn, tourist home, campground, mobile home park, recreational vehicle park or similar business where the rental period is less than 30 consecutive days.

C. The transient room tax is not subject to sales tax.

R865-19S-98. Sales and Use Tax Exemption for Vehicles, Off-highway Vehicles, and Boats Required to be Registered, and Boat Trailers and Outboard Motors Pursuant to Utah Code Ann. Section 59-12-104.

(1) "Use" means mooring, slipping, and dry storage as well as the actual operation of vehicles.

(2) An owner of a vehicle described in Subsections 59-12-104(9) or (31) may continue to qualify for the exemption provided by that section if use of the vehicle in this state is infrequent, occasional, and nonbusiness in nature.

(3) A vehicle is deemed not used in this state beyond the necessity of transporting it to the borders of this state if the vehicle is:

- (a) inspected in this state; or
- (b) tested for functionality in this state.

R865-19S-99. Sales and Use Taxes on Vehicles Purchased in Another State Pursuant to Utah Code Ann. Sections 59-12-103 and 59-12-104.

No sales or use tax is due on vehicles purchased in another state by a resident of that state and transferred into this state if all sales or use taxes required by the prior state for the purchase of the vehicle have been paid. A valid, nontemporary registration card shall serve as evidence of payment.

R865-19S-100. Procedures for Exemption from and Refund of Sales and Use Taxes Paid by Religious and Charitable Institutions Pursuant to Utah Code Ann. Section 59-12-104.1.

A. For purposes of Section 59-12-104.1(2)(b)(iii), "contract" does not include a purchase order.

B. Religious and charitable institutions may apply to the Tax Commission for a refund of Utah sales and use taxes paid no more often than on a monthly basis. Refund applications should be returned to the Tax Commission by the tenth day of the month for a timely refund.

C. Applications for refund of sales and use taxes shall be made on forms provided by the Tax Commission.

D. Religious and charitable institutions shall substantiate requests for refunds of sales and use taxes paid by retaining a copy of a receipt or invoice indicating the amount of sales or use taxes paid for each purchase for which a refund of taxes paid is claimed.

E. All supporting receipts required by D. must be provided to the Tax Commission upon request.

F. Original records supporting the refund claim must be maintained for three years following the date of refund.

G. Failure to pay any penalties and interest assessed by the Tax Commission may subject the institution to a deduction from future refunds of amounts owed, or revocation of the institution's exempt status as a religious or charitable institution, or both.

R865-19S-101. Application of Sales Tax to Fees Assessed in Conjunction with the Retail Sale of a Motor Vehicle Pursuant to Utah Code Ann. Section 59-12-103.

State-mandated fees and taxes assessed in conjunction with the retail sale of a motor vehicle are not subject to the sales tax and must be separately identified and segregated on the invoice as required by Tax Commission rule R877-23V-14.

R865-19S-102. Calculation of Qualifying Exempt Electricity Sales to Ski Resorts Pursuant to Utah Code Ann. Section 59-12-104.

A. When the sale of exempt electricity to a ski resort is not separately metered and accounted for in utility billings, the ski resort shall identify a methodology for the calculation of exempt

electricity purchases, and shall submit that methodology to Internal Customer Support, Customer Service Division, of the Tax Commission for approval prior to its use.

B. When exempt electricity is not separately metered and accounted for in utility billings, a ski resort shall pay sales tax on all electricity at the time of purchase. The ski resort may then take a credit on its sales tax return for taxes paid on electricity that is determined to be exempt under this rule.

C. The provisions of this rule shall be retrospective to July 1, 1996.

R865-19S-103. Municipal Energy Sales and Use Tax Pursuant to Utah Code Ann. Sections 10-1-303, 10-1-306, and 10-1-307.

(1) Definitions.

(a) "Gas" means natural gas in which those hydrocarbons, other than oil and natural gas liquids separated from natural gas, that occur naturally in the gaseous phase in the reservoir are produced and removed at the wellhead in gaseous form.

(b) "Supplying taxable energy" means the selling of taxable energy to the user of the taxable energy.

(2) Except as provided in Subsection (3), the delivered value of taxable energy for purposes of Title 10, Chapter 1, Part 3, shall be the arm's length sales price for that taxable energy.

(3) If the arm's length sales price does not include all components of delivered value, any component of the delivered value that is not included in the sales price shall be determined with reference to the most applicable tariffed price of the gas corporation or electrical corporation in closest proximity to the taxpayer.

(4) The point of sale or use of the taxable energy shall normally be the location of the taxpayer's meter unless the taxpayer demonstrates that the use is not in a municipality imposing the municipal energy sales and use tax.

(5) An energy supplier shall collect the municipal energy sales and use tax on all component parts of the delivered value of the taxable energy for which the energy supplier bills the user of the taxable energy.

(6) A user of taxable energy is liable for the municipal energy sales and use tax on any component of the delivered value of the taxable energy for which the energy supplier does not collect the municipal energy sales and use tax.

(7) A user of taxable energy who is required to pay the municipal energy sales and use tax on any component of the delivered value of taxable energy shall remit that tax to the commission:

- (a) on forms provided by the commission, and
- (b) at the time and in the manner sales and use tax is remitted to the commission.

(8) A person that delivers taxable energy to the point of sale or use of the taxable energy shall provide the following information to the commission for each user for whom the person does not supply taxable energy, but provides only the transportation component of the taxable energy's delivered value:

- (a) the name and address of the user of the taxable energy;
- (b) the volume of taxable energy delivered to the user; and
- (c) the entity from which the taxable energy was purchased.

(9) The information required under Subsection (8) shall be provided to the commission:

(a) for each user for whom, during the preceding calendar quarter, the person did not supply taxable energy, but provided only the transportation component of the taxable energy's delivered value; and

(b)(i) except as provided in Subsection (9)(b)(ii), at the time the person delivering the taxable energy files sales and use tax returns with the commission; or

(ii) if the person delivering the taxable energy files an

annual information return under Subsection 10-1-307(5), at the time that annual information return is filed with the commission.

R865-19S-104. County Option Sales Tax Distribution Pursuant to Utah Code Ann. Section 59-12-1102.

A. The \$75,000 minimum annual distribution required under Section 59-12-1102 shall be based on sales tax amounts collected by the counties from January 1 through December 31.

B. Any adjustments made to ensure the required minimum distribution shall be reflected in the February distribution immediately following the end of the calendar year.

R865-19S-108. User Fee Defined Pursuant to Utah Code Ann. Section 59-12-103.

A. For purposes of administering the sales or use tax on admission or user fees provided for in Section 59-12-103, "user fees" includes charges imposed on an individual for access to the following, if that access occurs at any location other than the individual's residence:

1. video or video game;
2. television program; or
3. cable or satellite broadcast.

B. The provisions of this rule are effective for transactions occurring on or after October 1, 1999.

R865-19S-109. Sales Tax Nature of Veterinarians' Purchases and Sales Pursuant to Utah Code Ann. Sections 59-12-103 and 59-12-104.

(1)(a) Purchases of tangible personal property by a veterinarian are exempt from sales and use tax if the property will be resold by the veterinarian.

(b) Except as provided in Subsection (5), a veterinarian must collect sales tax on tangible personal property that the veterinarian resells.

(2) Purchases of tangible personal property by a veterinarian are subject to sales and use tax if the property will be used or consumed in the veterinarian's practice.

(3) The determination of whether a veterinarian's purchase of food, medicine, or vitamins is a sale for resale or a purchase that will be used or consumed in the veterinarian's practice shall be made by the veterinarian.

(a) For food, medicine, or vitamins that the veterinarian will resell, the veterinarian shall comply with Subsection (1).

(b) For food, medicine, or vitamins that the veterinarian will use or consume in the veterinarian's practice, the veterinarian shall comply with Subsection (2).

(4) A veterinarian is not required to collect sales and use tax on:

- (a) medical services;
- (b) boarding services; or
- (c) grooming services required in connection with a medical procedure.

(5) Sales of tangible personal property by a veterinarian are exempt from sales and use tax if:

(a) the sales are exempt from sales and use tax under Section 59-12-104; and

(b) the veterinarian obtains from the purchaser a certificate as set forth in rule R865-19S-23.

R865-19S-110. Advertisers' Purchases and Sales Pursuant to Utah Code Ann. Section 59-12-103.

A. "Advertiser" means a person that places advertisements in a publication, broadcast, or electronic medium, regardless of the name by which that person is designated.

1. A person is an advertiser only with respect to items actually placed in a publication, broadcast, or electronic medium.

B. All purchases of tangible personal property by an advertiser are subject to sales and use tax as property used or

consumed by the advertiser.

C. The tax treatment of an advertiser's purchase of graphic design services shall be determined in accordance with rule R865-19S-111.

D. An advertiser's charges for placement of advertisements are not subject to sales and use tax.

R865-19S-111. Graphic Design Services Pursuant to Utah Code Ann. Section 59-12-103.

(1) Graphic design services are not subject to sales and use tax:

(a) if the graphic design is the object of the transaction; and

(b) even though a representation of the design is incorporated into a sample or template that is itself tangible personal property.

(2) Except as provided in Subsection (3), if a vendor provides both graphic design services and tangible personal property that incorporates the graphic design:

(a) there is a rebuttable presumption that the tangible personal property is the object of the transaction; and

(b) the vendor must collect sales and use tax on the graphic design services and the tangible personal property.

(3) A vendor that provides both graphic design services and tangible personal property that incorporates the graphic design is not required to collect sales tax on the graphic design services if the vendor subcontracts the production of the tangible personal property to an independent third party.

R865-19S-113. Sales Tax Obligations of Aircraft and Boat Tour Operators, and Other Sellers Providing Similar Services Pursuant to Utah Code Ann. Section 59-12-103.

(1) "Federal airway" shall be identical to the definition of Class E airspace in 14 C.F.R. 71.71 (2006), which is incorporated by reference.

(2) Amounts paid or charged for helicopter, airplane, or other aircraft tours that enter into airspace designated by the Federal Aviation Administration as a federal airway during the tour are exempt from the sales and use tax.

(a) The exemption described in Subsection (2) does not apply if the only time the aircraft enters a federal airway is prior to the commencement of the tour or after the tour ends.

(b) A tour is deemed to occur from the time a paying customer is picked up to the time the paying customer is dropped off at the final destination point.

(3) Amounts paid or charged for boat tours, scenic cruises, or other similar activities on the waters of the state are exempt from sales and use tax if the waters on which the tour, cruise, or other similar activity operates are used, by themselves or in connection with other waters, as highways for interstate commerce.

R865-19S-114. Items that Constitute Clothing Pursuant to Utah Code Ann. Section 59-12-102.

A. "Clothing" includes:

1. aprons for use in a household or shop;
2. athletic supporters;
3. baby receiving blankets;
4. bathing suits and caps;
5. beach capes and coats;
6. belts and suspenders;
7. boots;
8. coats and jackets;
9. costumes;
10. diapers, including disposable diapers, for children and adults;
11. ear muffs;
12. footlets;
13. formal wear;

14. garters and garter belts;
 15. girdles;
 16. gloves and mittens for general use;
 17. hats and caps;
 18. hosiery;
 19. insoles for shoes;
 20. lab coats;
 21. neckties;
 22. overshoes;
 23. pantyhose;
 24. rainwear;
 25. rubber pants;
 26. sandals;
 27. scarves;
 28. shoes and shoe laces;
 29. slippers;
 30. sneakers;
 31. socks and stockings;
 32. steel toed shoes;
 33. underwear;
 34. uniforms, both athletic and non-athletic; and
 35. wearing apparel.
- B. "Clothing" does not include:
1. belt buckles sold separately;
 2. costume masks sold separately;
 3. patches and emblems sold separately;
 4. sewing equipment and supplies, including:
 - a) knitting needles;
 - b) patterns;
 - c) pins;
 - d) scissors;
 - e) sewing machines;
 - f) sewing needles;
 - g) tape measures; and
 - h) thimbles; and
 5. sewing materials that become part of clothing, including:
 - a) buttons;
 - b) fabric;
 - c) lace;
 - d) thread;
 - e) yarn; and
 - f) zippers.

R865-19S-115. Items that Constitute Protective Equipment Pursuant to Utah Code Ann. Section 59-12-102.

- "Protective equipment" includes:
- A. breathing masks;
 - B. clean room apparel and equipment;
 - C. ear and hearing protectors;
 - D. face shields;
 - E. hard hats;
 - F. helmets;
 - G. paint or dust respirators;
 - H. protective gloves;
 - I. safety glasses and goggles;
 - J. safety belts;
 - K. tool belts; and
 - L. welders gloves and masks.

R865-19S-116. Items that Constitute Sports or Recreational Equipment Pursuant to Utah Code Ann. Section 59-12-102.

- "Sports or recreational equipment" includes:
- A. ballet and tap shoes;
 - B. cleated or spiked athletic shoes;
 - C. gloves, including:
 - (i) baseball gloves;
 - (ii) bowling gloves;
 - (iii) boxing gloves;

- (iv) hockey gloves; and
- (v) golf gloves;
- D. goggles;
- E. hand and elbow guards;
- F. life preservers and vests;
- G. mouth guards;
- H. roller skates and ice skates;
- I. shin guards;
- J. shoulder pads;
- K. ski boots;
- L. waders; and
- M. wetsuits and fins.

R865-19S-117. Use of Rounding in Determining Sales and Use Tax Liability Pursuant to Utah Code Ann. Section 59-12-118.

- A. The computation of sales and use tax must be:
1. carried to the third place; and
 2. rounded to a whole cent pursuant to B.
- B. The tax shall be rounded up to the next cent whenever the third decimal place of the tax liability calculated under A. is greater than four.
- C. Sellers may compute the tax due on a transaction on an:
1. item basis; or
 2. invoice basis.
- D. The rounding required under this rule may be applied to aggregated state and local taxes.

R865-19S-118. Collection of Municipal Telecommunications License Tax Pursuant to Utah Code Ann. Section 10-1-405.

- A. The commission shall transmit monies collected under Title 10, Chapter 1, Part 4, Municipal Telecommunications License Tax Act:
1. monthly; and
 2. by electronic funds transfer to the municipality that imposes the tax.
- B. The commission shall conduct audits of the municipal telecommunications license tax with the same frequency and diligence as it does with the state sales and use tax.
- C. The commission shall charge a municipality for the commission's services in an amount:
1. sufficient to reimburse the commission for the commission's cost of administering, collecting, and enforcing the municipal telecommunications license tax; and
 2. not to exceed an amount equal to 1.5 percent of the municipal telecommunications license tax imposed by the ordinance of the municipality.
- D. The commission shall collect, enforce, and administer the municipal telecommunications license tax pursuant to the same procedures used in the administration, collection, and enforcement of the state sales and use tax as provided in Subsection 10-1-405(1)(a).

R865-19S-120. Sales and Use Tax Exemption Relating to Film, Television, and Video Pursuant to Utah Code Ann. Section 59-12-104.

(1) The provisions of this rule apply to the sales and use tax exemption authorized under Section 59-12-104 for the purchase, lease, or rental of machinery or equipment by certain establishments related to film, television, and video if those purchases, leases, or rentals are primarily used in the production or postproduction of film, television, video, or similar media for commercial distribution.

(2) "Machinery or equipment" means tangible personal property eligible for capitalization under accounting standards.

(3)(a) "Tangible personal property eligible for capitalization under accounting standards" means tangible personal property with an economic life greater than one year.

(b) "Tangible personal property eligible for capitalization

under accounting standards" does not include tangible personal property with an economic life of one year or less, even if that property is capitalized on the establishment's financial records.

(c) There is a rebuttable presumption that an item of tangible personal property is not eligible for capitalization if that property is not shown as a capitalized asset on the financial records of the establishment.

(4) Transactions that do not qualify for the sales tax exemption referred to in Subsection (1) include purchases, leases, or rentals of:

- (a) land;
- (b) buildings;
- (c) raw materials;
- (d) supplies;
- (e) film;
- (f) services;
- (g) transportation;
- (h) gas, electricity, and other fuels;
- (i) admissions or user fees; and
- (j) accommodations.

(5) If a transaction is composed of machinery or equipment and items that are not machinery or equipment, the items that are not machinery or equipment are exempt from sales and use tax if the items are:

- (a) an incidental component of a transaction that is a purchase, lease, or rental of machinery or equipment; and
- (b) not billed as a separate component of the transaction.

(6)(a) Except as provided in Subsection (6)(b), an item used for administrative purposes does not qualify for the exemption.

(b) Notwithstanding Subsection (6)(a), if an item is used both in the production or postproduction process and for administrative purposes, the item qualifies for the exemption if the primary use of the item is in the production or postproduction process.

R865-19S-121. Sales and Use Tax Exemptions for Certain Purchases by a Mining Facility Pursuant to Utah Code Ann. Section 59-12-104.

(1) Definitions.

(a) "Establishment" means a unit of operations, that is generally at a single physical location in Utah, where qualifying activities are performed. If a business operates in more than one location (e.g., branch or satellite offices), each physical location is considered separately from any other locations operated by the same business.

(b) "Machinery and equipment" means electronic or mechanical devices having an economic life of three or more years including any accessory that controls the operation of the machinery and equipment.

(2) The exemptions do not apply to purchases of items of tangible personal property that become part of the real property.

(3) Purchases of qualifying machinery and equipment are treated as purchases of tangible personal property under R865-19S-58, even if the item is affixed to real property upon installation.

(4) Machinery and equipment used for non-qualifying activities are eligible for the exemption if the machinery and equipment are primarily used in qualifying activities.

(5) The entity claiming the exemption shall retain records to support the claim that the machinery and equipment are qualified for exemption from sales and use tax under the provisions of this rule and Section 59-12-104.

R865-19S-122. Sales and Use Tax Exemptions for Certain Purchases by a Web Search Portal Establishment Pursuant to Utah Code Ann. Section 59-12-104.

(1) Definitions.

(a) "Establishment" means a unit of operations, that is

generally at a single physical location in Utah, where qualifying activities are performed. If a business operates in more than one location (e.g., branch or satellite offices), each physical location is considered separately from any other locations operated by the same business.

(b) "Machinery and equipment" means electronic or mechanical devices having an economic life of three or more years including any accessory that controls the operation of the machinery and equipment.

(c) "New or expanding establishment" means:

(i)(A) the creation of a new web search portal establishment in this state; or

(B) the expansion of an existing Utah web search portal establishment if the expanded establishment increases services or is substantially different in nature, character, or purpose from the existing Utah web search portal establishment.

(ii) The operator of a web search portal establishment who closes operations at one location in this state and reopens the same establishment at a new location does not qualify as a new or expanding establishment without demonstrating that the move meets the conditions set forth in Subsection (1)(c)(i).

(2) The exemption for certain purchases by a web search portal establishment does not apply to purchases of items of tangible personal property that become part of the real property.

(3) Purchases of qualifying machinery and equipment are treated as purchases of tangible personal property under R865-19S-58, even if the item is affixed to real property upon installation.

(4) Machinery and equipment used for non-qualifying activities are eligible for the exemption if the machinery and equipment are primarily used in qualifying activities.

(5) The entity claiming the exemption shall retain records to support the claim that the machinery and equipment are qualified for exemption from sales and use tax under the provisions of this rule and Section 59-12-104.

R865-19S-123. Specie Legal Tender Pursuant to Utah Code Ann. Section 59-12-107.

For purposes of determining the amount of sales tax due in specie legal tender and in dollars for a purchase made in specie legal tender, if the London fixing price is not available for a day on which a purchase is made in specie legal tender, a seller shall use the latest available London fixing price for the specie legal tender the purchaser paid that precedes the date of the purchase.

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	10-1-303
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	59-12-352
	59-12-353

R926. Transportation, Program Development.**R926-13. Designated Scenic Byways.****R926-13-1. Purpose.**

The purpose of this rule is to identify the following:

(1) The specific highways currently designated as state scenic byways.

(2) The definition of the limits of the individual scenic byways for all purposes related to that designation, including, but not limited to, grant and funding availability, and applicable outdoor advertising regulations.

(3) The specific state scenic byways within the State of Utah currently having also been designated by the National Scenic Byways Program of the Federal Highway Administration as either National Scenic Byways or All-American Roads.

R926-13-2. Authority.

The provisions of this rule are authorized by the following grants of rulemaking authority and provisions of Utah Code: Title 63G, Chapter 3; and the Designation of Highways Act, Title 72, Chapter 4.

R926-13-3. Definitions.

Terms used in this rule are defined in Title 72, Chapter 4 and in Rule 926-14-3. The following additional term is defined for this rule:

(1) "FAS" (with corresponding four-digit number) is a designation given by the department to identify local roadways off the state highway system that are part of the federal aid secondary system because they are functionally classified as minor collectors or higher.

R926-13-4. Highways Within the State That Are Designated as State Scenic Byways.

The following roads are designated as state scenic byways (date of designation is April 9, 1990 unless otherwise specified):

(1) Logan Canyon Scenic Byway. US Route 89, beginning at 1500 East in Logan and running to the intersection of SR-30 in Garden City, excluding a 20-foot segment within Garden City at a location centered at approximately mile point 497.73.

(a) Designated April 9, 1990.

(b) Shortened June 13, 2002 when designated a National Scenic Byway and the portion of US-89 from Garden City to the Utah/Idaho State Line was transferred to the Bear Lake Scenic Byway.

(c) Segment excluded May 13, 2010 by action of the Garden City town council which determined the segment at approximately mile point 497.73 lay adjacent to a non-scenic area.

(2) Bear Lake Scenic Byway. US Route 89, beginning at the Utah/Idaho state line and running to SR-30; and State Route 30, beginning at US-89, and running to East Shore Road in Laketown.

(a) Designated April 9, 1990 as Laketown Scenic Byway.

(b) Extended and renamed June 13, 2002 to include the portion of US-89 originally included in the state designation of the Logan Canyon Scenic Byway that was excluded when that byway was designated a National Scenic Byway.

(3) Ogden River Scenic Byway. State Route 39, beginning at Valley Drive, near the mouth of Ogden Canyon, and running to the eastern Wasatch-Cache Forest boundary near highway milepost 48; and State Route 158 from SR-39, and running to County Road FAS-3468; and the County Road FAS-3468, from SR-158, running to SR-39.

(4) Big Cottonwood Canyon Scenic Byway. State Route 190, beginning at SR-210, and running to the end of the Brighton Loop.

(5) Little Cottonwood Canyon Scenic Byway. State Route 210, beginning at SR-209, and running to the end of state

maintenance, near Alta.

(6) Provo Canyon Scenic Byway. US Route 189, beginning at SR-52, and running to SR-113, near Charleston; and State Route 113, from US-189 running to US-40 in Heber City.

(a) Designated April 9, 1990.

(b) Realigned onto SR-113 from the eastern portion of US-189 February 25, 2003.

(7) Mirror Lake Scenic Byway. State Route 150, beginning at SR-32 in Kamas, and running to the Utah/Wyoming State Line.

(8) Flaming Gorge-Uintas Scenic Byway. US Route 191, beginning at US-40 in Vernal, and running to the Utah/Wyoming State Line; State Route 44, from US-191, running to SR-43 in Manila; and State Route 43, from SR-44, running to the Utah/Wyoming state line.

(a) Designated April 9, 1990 on SR-44 and US-191 between SR-44 and Vernal.

(b) Added November 18, 1992 the portion of US-191 between SR-44 and the state line.

(9) Indian Canyon Scenic Byway. US Route 191, beginning at US-6 near Helper, and running to US-40 in Duchesne.

(10) The Energy Loop: Huntington and Eccles Canyons Scenic Byway. State Route 31, beginning at US-89 in Fairview, and running to SR-10 in Huntington; State Route 264, from SR-31, running to SR-96; and State Route 96, from Clear Creek, and running to US-6 near Colton.

(a) Designated April 9, 1990 on SR-31 and SR-264.

(b) Extended circa 1992 to add SR-96 between Clear Creek and Colton.

(11) Nebo Loop Scenic Byway. State Route 115, beginning at I-15 and running to SR-198; State Route 198, from SR-115 running to 600 East in Payson; and along County Road FAS-2822 (600 East) and National Forest Road 015 (FAS-1822 and the portion of FAS-1820 south of FAS-1822) running to SR-132 in Juab County.

(12) Upper Colorado River Scenic Byway. State Route 128, beginning at US-191 near Moab, and running to I-70 West Cisco interchange.

(13) Potash-Lower Colorado River Scenic Byway. State Route 279, beginning at the southwest end of SR-279 near the Potash Plant and running to US-191.

(14) Indian Creek Corridor Scenic Byway. State Route 211, beginning at US-191 and running to County Road FAS-2432; and County Road FAS-2432 from SR-211 running to the Canyonlands National Park Visitor Center.

(15) Bicentennial Highway Scenic Byway. State Route 95, beginning at SR-24, and running to US-191.

(16) Trail of The Ancients Scenic Byway. State Route 95, beginning at SR-275, and running to US-191; State Route 275, from SR-95 and running to Natural Bridges National Monument; US Route 191 from Center Street in Blanding running to SR-162 in Bluff; and State Route 162 from US-191 running to the Utah/Colorado state line.

(a) Designated February 7, 1994 on SR-275, over the eastern portion of the Bicentennial Highway Scenic Byway between SR-275 and US-191, and on US-191 between Blanding and SR-262.

(b) Extended June 6, 2001 to include US-191 between SR-262 and Bluff, and to include SR-162.

(17) Monument Valley to Bluff Scenic Byway. US Route 163, beginning at the Utah/Arizona State Line running to US-191; and US Route 191 from US-163 running to the Cottonwood Wash Bridge in Bluff.

(18) Capitol Reef Country Scenic Byway. State Route 24, beginning at SR-72 in Loa, and running to SR-95 in Hanksville.

(19) Highway 12, A Journey Through Time Scenic Byway. State Route 12, beginning at US-89 near Panguitch,

and running to SR-24 near Torrey.

(20) Markagunt High Plateau Scenic Byway. State Route 14, beginning at SR-130 and running to US-89.

(21) Cedar Breaks Scenic Byway. State Route 148, beginning at SR-14, through Cedar Breaks National Monument, running to SR-143.

(22) Brian Head-Panguitch Lake Scenic Byway. State Route 143, beginning at I-15 South Parowan Interchange, and running to US-89 in Panguitch.

(23) Beaver Canyon Scenic Byway. State Route 153, beginning at SR-160 in Beaver, and running to the end of pavement near Elk Meadows.

(24) Mt. Carmel Scenic Byway. US Route 89, beginning at the Kanab north city limit (approximately highway milepost 65), and running to SR-12.

(25) Zion Park Scenic Byway. State Route 9, beginning at I-15 and running to US-89.

(26) Kolob Fingers Road Scenic Byway. The National Park Service Road, beginning at I-15, and running to the Kolob Canyon Overlook.

(27) Dead Horse Mesa Scenic Byway. State Route 313, from US-191 running to Dead Horse Point State Park; and the Island in the Sky Road FAS-1708, from SR-313 running to Grandview Point.

(a) Designated May 16, 2002.

(28) Fishlake Scenic Byway. State Route 25 and County Roads FAS-2554 (comprising Fish Lake Road/Forest Highway 31) and FAS-3268 (Freemont River Road/Forest Highway 42), beginning at SR-24, and running to SR-72.

(a) Designated April 9, 1990, on SR-25 between SR-24 and Johnson Valley Reservoir.

(b) Extended November 18, 1992, along the Fremont River Road between Johnson Valley Reservoir and SR-72 to comprise the southern portion of the Gooseberry/Fremont Road Scenic Backway.

(29) Dinosaur Diamond Prehistoric Highway Scenic Byway. Interstate 70, from the Utah/Colorado state line running to Cisco Exit 214; the County Road FAS-1714 through Cisco, from I-70 running to SR-128; State Route 128, from the Cisco Road running to US-191 near Moab; US Route 191, from SR-128 running to I-70 at Crescent Junction; Interstate 70, from US-191 at Crescent Junction running to US-6 near Green River; US Route 6, from I-70 running to US-191 near Helper; US Route 191, from US-6 near Helper running to US-40 in Duchesne; US Route 40, from US-191 in Duchesne to the Utah/Colorado state line.

(a) Dinosaur Diamond Prehistoric Highway designated in Title 72, Chapter 4, Section 204 in 1998.

(b) Scenic byway route established with National Scenic Byway designation differs from special highway designation in that it includes County Road FAS-1714 and I-70 east of Cisco and does not at this time include those portions located on SR-10, on SR-155, or on US-191 south of SR-128.

(c) Segment excluded June 27, 2013 by action of the Naples City Council which determined the segment on US-40 at approximately mile point 145.87 (300 South) to mile point 148.53 (3000 South) become a non-scenic byway.

(d) Segment excluded July 20, 2015 by action of the Uintah County Commission which determined the segment on US-40 from mile point 153 to 154 become a non-scenic byway.

(e) Segment excluded August 31, 2015 by action of the Uintah County Commission which determined the segment on US-40 from mile point 154 to 156 become a non-scenic byway.

(30) Great Salt Lake Legacy Parkway Scenic Byway. State Route 67, beginning at I-215 and running to I-15.

(a) Designated May 16, 2002.

The following roads are designated by the National Scenic Byways Program as National Scenic Byways or All-American Roads:

(1) Flaming Gorge-Uintas National Scenic Byway.

(a) Comprised of the Flaming Gorge-Uintas State Scenic Byway.

(b) Designated National Scenic Byway June 9, 1998.

(2) Nebo Loop National Scenic Byway.

(a) Comprised of the Nebo Loop State Scenic Byway.

(b) Designated National Scenic Byway June 9, 1998.

(3) The Energy Loop: Huntington and Eccles Canyons National Scenic Byway.

(a) Comprised of the Energy Loop: Huntington and Eccles Canyons State Scenic Byway.

(b) Designated National Scenic Byway June 15, 2000.

(4) Logan Canyon National Scenic Byway.

(a) Comprised of the Logan Canyon State Scenic Byway.

(b) Designated National Scenic Byway June 13, 2002.

(5) Dinosaur Diamond Prehistoric Highway National Scenic Byway.

(a) Comprised of the Dinosaur Diamond Prehistoric Highway Scenic Byway.

(b) Also comprises the Indian Canyon State Scenic Byway and the Upper Colorado River State Scenic Byway (excluding the portion of SR-128 between I-70 and County Road FAS-1714).

(c) Designated NSB June 13, 2002.

(6) Scenic Byway 12 All-American Road.

(a) Comprised of the Highway 12, A Journey Through Time State Scenic Byway.

(b) Designated All-American Road June 13, 2002.

(7) Trail of the Ancients National Scenic Byway.

(a) Comprised of:

(i) The Trail of the Ancients State Scenic Byway,

(ii) The Monument Valley to Bluff State Scenic Byway,

(iii) The section of the Trail of the Ancients State Scenic Backway on SR-261 starting at US-163 and running to SR-95 (but excluding for now that portion on SR-316 between SR 261 and Goosenecks State Park that was accidentally omitted on the NSB application),

(iv) The section of the Trail of the Ancients State Scenic Backway running on SR-262 between US-191 and County Road FAS-2416, and on FAS-2416 starting at SR-262 and running southeasterly to County Road FAS-2422, then northeasterly on FAS-2422 to the Utah/Colorado State Line near Hovenweep National Monument.

(b) Designated National Scenic Byway September 22, 2005.

(8) Utah's Patchwork Parkway National Scenic Byway.

(a) Comprised of Brian Head-Panguitch Lake State Scenic Byway.

(b) Designated National Scenic Byway October 16, 2009.

KEY: transportation, scenic byways, highways

April 8, 2016

Notice of Continuation June 16, 2015

72-4-303

63G-3-201

R926-13-5. Highways Within the State That Are Designated as National Scenic Byways or All-American Roads.