MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

Understanding the Asbestos NESHAP

Fact Sheet

The Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (U.S. EPA) to develop and enforce regulations to protect the general public from exposure to airborne contaminants that are known to be hazardous to human health. The U.S. EPA established the National Emission Standards for Hazardous Air Pollutants (NESHAP) under the authority of Section 112 of the CAA, and asbestos was one of the first hazardous air pollutants regulated. The Asbestos NESHAP was promulgated on April 6, 1973, and it was revised in 1990.

Asbestos was widely used in buildings for fireproofing, thermal and acoustical insulation, condensation control, and decoration. It was sprayed on beams and ceilings, used to cover piping and boilers, and sprayed onto ducts. Asbestos was used extensively until the 1970s when U.S. EPA banned certain applications.

The Asbestos NESHAP protects the public by minimizing the release of asbestos fibers during renovation and demolition activities. Accordingly, this regulation specifies work practices to be followed for demolitions and renovations of all structures, installations, and buildings. Privately owned residential dwellings or apartments that are demolished for urban renewal or as part of a public or commercial project would be covered under the NESHAP regulations. Residential dwellings containing four units or less under private control or ownership would not be subject to the NESHAP. In addition, the Asbestos NESHAP contains notification requirements for the owner of the building and/or the contractor. Both the owner and contractor(s) are liable for compliance with the Asbestos NESHAP requirements.

The purpose of this publication is to describe who is subject to the Asbestos NESHAP and to explain the requirements of this standard. A brief glossary is provided at the end of this document to assist in understanding some of the terms (appearing in **boldface** text) discussed in this fact sheet. This fact sheet is to be used only as a guide and is not a substitute for reading and understanding the final rule which is found in Title 40, Part 61, Subpart M of the Code of Federal Regulations (40 CFR Part 61). For a copy of the final rule, see the “Where To Get Additional Information” section on page 10.

WHAT AGENCIES REGULATE ASBESTOS?

There are three state agencies in Michigan that regulate **asbestos**: the Michigan Department of Environment, Great Lakes, and Energy (EGLE), the Michigan Department of Labor and Economic Opportunity (LEO) and the Michigan Department of State Police (MSP). The EGLE is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while LEO focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

- ***Michigan Department of Environment, Great Lakes, and Energy (EGLE)***

The U.S. EPA has delegated the Air Quality Division (AQD) of the EGLE with the authority to enforce the Asbestos NESHAP in Michigan. In addition, the state of Michigan has adopted the federal regulations into the Michigan Administrative Code (MAC), 1995 AACS R 336.1942 (Rule 942), which is in effect as of November 30, 2000 and revised September 11, 2008. A violation of the federal asbestos regulations is also a violation of the MAC. The AQD administers the asbestos NESHAP for the entire state: reviewing the notifications, inspecting demolitions and asbestos removals, and initiation enforcement actions when violations occur. Approximately 14,000

notifications were received in FY 2018 by this agency and are reviewed for completeness and timeliness. Inspections are made based on contractor history, areas of the state, and type of project. Inspections are also performed in response to complaints. The U.S. EPA can and does conduct independent inspections of NESHAP projects.

The Waste Management Division of the EGLE regulates disposal of asbestos.

- ***Michigan Department of Labor and Economic Opportunity (LEO)***

The Occupational Health Division of LEO implements the Asbestos Abatement Contractors Licensing Act, the Michigan Occupational Safety and Health Act (MIOSHA), the Asbestos Workers Accreditation Act, and the MIOSHA Asbestos Construction Standard. Some of the requirements in these acts and standards include work practices, training, and project notification. LEO also licenses those who train asbestos removal workers about the regulations. For more information about the LEO Asbestos Program, see the "Where to Get Additional Information" section on page 10.

- ***Michigan Department of State Police (MSP)***

The Hazardous Materials and Investigations Unit of the MSP is responsible for enforcing the U.S. Department of Transportation's (U.S.DOT) regulations regarding shipping and transporting of packaged materials by highway. Asbestos, transported for disposal as a hazardous material, is regulated under 49 CFR Parts 100-185. For more information, refer to the "Where to Get Additional Information" section on page 10.

ASBESTOS NESHAP APPLICABILITY

To determine applicability to the Asbestos NESHAP, three questions must be answered:

- ☞ Is the facility regulated by the NESHAP?
- ☞ Is the activity a demolition or a renovation?
- ☞ Does the amount of **regulated asbestos-containing material (RACM)** meet or exceed the thresholds?

☞ ***Is the Facility Regulated by the Asbestos NESHAP?***

A **facility** subject to the NESHAP can be any institutional, commercial, or industrial structure, **installation,** or building. Examples include, but are not limited to:

- ✓ Bridges;
- ✓ Tunnels;
- ✓ Docked ships;
- ✓ Military installations, including dependent housing;
- ✓ Chemical/power plant installations;
- ✓ Indoor shopping malls;
- ✓ School buildings in a school district;
- ✓ Post office buildings;
- ✓ Apartment buildings containing five or more dwelling units;
- ✓ Certain condominiums, cooperatives, and lofts;
- ✓ Dwellings which are part of an urban renewal project, highway construction, shopping mall, or other private development (which are not privately owned and held);

- ✓ Groups of residential buildings under control of the same owner/operator and part of the same renovation/demolition project (even if the buildings are not proximate to each other);
- ✓ Amusement parks or state fairgrounds;
- ✓ Jails or prisons;
- ✓ Nursing homes or homes for disabled persons;
- ✓ Parking garages;
- ✓ Farms;
- ✓ Churches, monasteries, convents, or rectories; and
- ✓ Residential dwellings intentionally burned for fire training, etc.

Some examples of facilities not subject to the Asbestos NESHAP include:

- ✓ Privately owned homes, not demolished for urban renewal or as part of a public or commercial project;
- ✓ Privately-owned, multi-dwelling units with four or less dwelling units; and
- ✓ Mobile sources.

☞ ***Is the Activity a Demolition or a Renovation?***

A **demolition** is the wrecking or taking out of any load-supporting **structural member** of a facility together with any related handling operations or the intentional burning of any facility. A **renovation** is altering a facility or one or more facility components in any way, including the **stripping** or **removal** of RACM from a facility component (excluding operations in which load-supporting structural members are wrecked or taken out). Table 1 lists some examples of demolition and renovation activities.

Table 1. Examples of Demolition and Renovation Activities

Demolition	Renovation
The wrecking or taking out of any load-supporting structural member or the intentional burning of any facility.	Altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component, but excluding operations in which load-supporting structural members are wrecked or taken out.
• Wrecking or taking out building beams or load-supporting walls; • Removing the structural steel Supports of outdoor pipe racks; • Intentional burning, including intentional burning for fire training (this includes privately-owned, single-family dwellings); • Wrecking or tearing down a portion of a structure that is load-supporting; or • Renovating or remodeling a facility that includes wrecking or removing a load-supporting wall or component, etc.	• Scraping asbestos insulation off a ceiling; • Removing a boiler covered with friable asbestos from a building; • Removing pipe covered with friable asbestos from a pipe rack; • Gross removal of boiler asbestos insulation; • Glove bag stripping of asbestos pipe wrap; • Drilling through asbestos ceiling plaster to build a dropped ceiling; • Removing soundproofing, ceiling tiles, or plaster containing asbestos; • Removing vinyl asbestos floor tile or any asbestos-containing material that is normally nonfriable that is **in poor condition** (cracking, peeling, or showing other signs of deterioration). For example, it can be crumbled or pulverized by hand pressure; or • Activities that will render nonfriable material friable, such as grinding, sanding, crumbling, pulverizing, sawing, or other abrasive action, etc.

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☞ ***When Must an Asbestos Inspection and Detection Survey Be Completed?***
The Asbestos NESHAP requires that a thorough inspection be conducted for all renovations and all demolitions. The requirement to conduct a thorough inspection applies regardless of the building's age of construction or renovation history. All inspections must be completed before the commencement of a subject renovation and/or demolition activity, and the contractor performing the inspection must be listed on the joint EGLE/LEO "Notification of Intent to Renovate/Demolish" form. Inspections utilizing just visual examination are not acceptable unless the building is primarily steel and concrete materials or no materials in the building are likely to contain asbestos. Both contractors and their legal representatives, as well as owners and their legal representatives, are fully responsible for fulfilling the Asbestos NESHAP inspection requirements.

Although the Asbestos NESHAP does not specifically state that the person who does the inspection and conducts the site survey be trained in recognizing potential asbestos-containing material, the prerequisite of a trained survey inspector still may be a requirement under the Occupational Safety and Health Administration's (OSHA) Asbestos Standards. The federal OSHA Asbestos Standard for Construction (29 CFR 1926.1101) and the OSHA Asbestos Standard for General Industry (29 CFR 1910.1001) are administered by the LEO's, MIOSHA program. Each standard requires that all **public and commercial buildings** constructed prior to 1981, where employees may enter, work, or contact building materials, must be inspected for **asbestos-containing materials (ACM)**. This includes any houses, garages, apartments, etc. where employees work and may disturb asbestos. Additionally, all such vacant buildings scheduled for renovation or demolition must have an asbestos building survey completed prior to the start of the work.

Inspections under the OSHA standards must also adhere to the AHERA inspection protocol and be performed by a Michigan-accredited asbestos building inspector or a Certified Industrial Hygienist (CIH). The building survey must document the presence, location, and quantity of <u>all</u> "suspect" ACM. Laboratory analysis information should be a part of the building survey document and be kept by the building owner.

Once an asbestos building survey has confirmed or assumed the presence of ACM, all employees who work around, but do not disturb the ACM (i.e., persons conducting janitorial, building maintenance, and/or housekeeping activities) must receive, at a minimum, asbestos awareness training. Additionally, employees who may disturb ACM (i.e., persons working with any of the mechanical systems that have ACM) are required to have additional asbestos-related training. See the section entitled, "Where to Get Additional Information," for further assistance with the standard's inspection, licensing, and training requirements.

☞ ***Does the Amount of RACM Meet or Exceed the Thresholds?***
Thoroughly inspect the facility for asbestos, including **Category I and Category II nonfriable asbestos-containing material (ACM)**. Determine if the combined amount of RACM is at or above the thresholds listed in Table 2. RACM includes:

- ✓ Friable asbestos material;
- ✓ Category I nonfriable ACM that has become friable;
- ✓ Category I nonfriable ACM that will be or has been subjected to sanding, **grinding**, **cutting**, or abrading; or
- ✓ Category II nonfriable ACM that has a high probability of becoming or has become crumbled,pulverized, or reduced to powder by the forces expected to act on the material during demolition or renovation.

To determine whether **planned renovation operations** involving individual **nonscheduled renovation operations** are subject, predict the combined additive amount of RACM to be removed during a calendar year of January 1 through December 31.

Table 2. Applicability Thresholds

Location of Asbestos	Threshold Level of RACM
Pipes	80 linear meters (260 linear feet)
Other facility components	15 square meters (160 square feet)
Asbestos that is already off facility components where the length or area could not be measured previously.	1 cubic meter (35 cubic feet)

Any demolition or renovation activity that meets or exceeds the applicability thresholds in Table 2 is subject to all the renovation/demolition requirements of the NESHAP. Demolition activities below the thresholds (even for facilities with no asbestos) are subject to the notification requirement. Figure 1 summarizes the process for determining applicability to the Asbestos NESHAP.

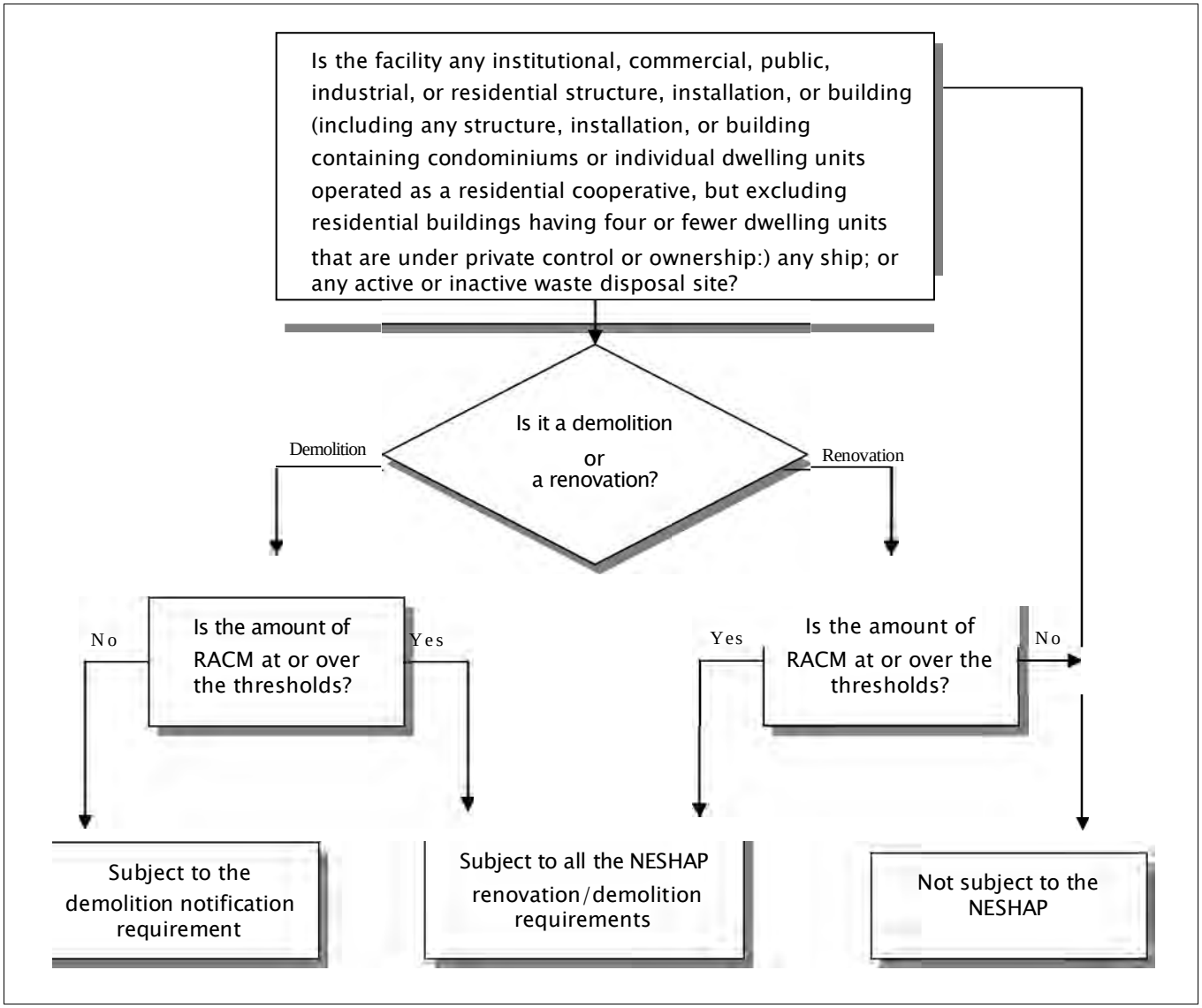

Figure 1. Flowchart for Determining Applicability to the Asbestos NESHAP

Examples of operations that are neither demolitions nor subject renovations and, therefore, not subject to the Asbestos NESHAP include:

- ✓ Renovation below the threshold levels unless it is above the threshold levels cumulatively in a calendar year (notification may be required by LEO);
- ✓ Removal of **nonfriable asbestos-containing material**, as long as the material is not in poor condition and it remains nonfriable during all phases of removal, handling, and waste disposal;
- ✓ Asbestos encapsulation (notification may be required by LEO); and
- ✓ Removal of interior, non-load supporting walls that are not associated with any regulated asbestos-containing material.

ASBESTOS NESHAP ADVANCE NOTIFICATION REQUIREMENT

An important aspect of the NESHAP is the advance notification requirement, which enables the AQD to ensure that all precautions are being taken to minimize asbestos emissions. Building **owners** or contractors must submit notifications for all subject demolitions and for subject renovations where the amount of RACM meets or exceeds the thresholds. Notifications should be entered online using our online Asbestos Notification System (ANS) found at **www.michigan.gov/air** under "Asbestos NESHAP Program" at least ten **working days** prior to beginning regulated demolition or renovation activities. For planned renovation operations involving individual, nonscheduled operations, the notification is required at least ten working days before the beginning of the calendar year for which notice is being given. Notifications must be entered as early as possible, but not later than the following work day for ordered demolitions and for emergency renovation operations. An **emergency renovation operation** means that the renovation operation was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden.

The notification must include the following information:

- ✓ Date of notification (or date of revision);
- ✓ Type of notification (original, revised, canceled, annual);
- ✓ Type of operation (demolition or renovation);
- ✓ Scheduled starting and completion dates of asbestos removal work;
- ✓ Scheduled starting and completion dates of demolition or renovation;
- ✓ Abatement contractor information;
- ✓ Demolition contractor information (if project is a demolition);
- ✓ Facility owner information;
- ✓ Facility description including location;
- ✓ Disposal site information;
- ✓ Waste transporter information;
- ✓ Ordered demolition information (if project is an ordered demolition);

- ✓ Estimate of amount of RACM to be removed and amount of Category I and Category II nonfriable ACM that will not be removed before demolition;
- ✓ Project description, including surfaces asbestos will be removed from, removal method, and method of demolition;
- ✓ Engineering controls description;
- ✓ Procedure if unexpected asbestos is found;
- ✓ Procedure used to detect asbestos;
- ✓ Emergency renovation information (if project is an emergency renovation); and
- ✓ Certification that at least one trained person will supervise the asbestos stripping and removal.

Michigan's "Notification of Intent to Renovate/Demolish" form should be used to fulfill the notification requirement using the online ANS. For the online link, along with guidelines on how to complete the form, see the "Where to Get Additional Information" section on page 10. U.S. Postal Service, commercial delivery service, or hand delivery (or revisions to notifications) is not recommended. Telefaxing notifications is not acceptable. It is not necessary to send copies of NESHAP notifications to the U.S. EPA for renovation or demolition activities in Michigan.

- ***Revising a Notification***

A revised notification should be sent any time there is a change in any of the required information previously submitted. The NESHAP specifically requires a revision if the amount of asbestos reported changes by 20% (either a decreased amount or an increased amount). An increased amount refers to additional asbestos unexpectedly found while working on the specific project covered in the notification. If the scope of the project increases, a new notification is required. For example, removing asbestos from an area of the building not covered by the original notification would be considered a change in project scope.

- ***Revising Project Dates***

If the project will begin on a date later than the date in the original notice (or latest revision), revise the notification no later than the previously scheduled start date. If the project will start earlier than the original start date (or latest revision), provide the new start date at least ten working days before beginning the project. **Under no circumstances shall a NESHAP project begin on a date other than the date in the notification (or the latest revised notification).**

If a project will be postponed indefinitely and a new start date cannot be predicted immediately submit a revised notification canceling the project. If the project is rescheduled, a new notification must be submitted at least ten working days prior to beginning the project. It is unacceptable to indefinitely postpone a project and then submit a revised start date less than ten working days before the project is to begin.

WORK PRACTICE STANDARDS

For a demolition project, the RACM is not required to be removed or stripped if any of the following criteria are met:

- ✓ It is Category I nonfriable ACM that is not in poor condition, is not **friable**, and a licensed asbestos abatement contractor is made available at the demolition site.
- ✓ It is on a **facility component** that is encased in concrete or other similarly hard material and is adequately wet whenever exposed during demolition.
- ✓ It was not accessible for testing and, therefore, was not discovered until after the demolition began and as a result of the demolition cannot be safely removed.

- ✓ It is Category II nonfriable ACM with low probability of becoming crumbled, pulverized, or reduced to powder during demolition.
- ✓ For large facility components (reactor vessels, large tanks, steam generators, etc. but not beams): the component is removed, transported, stored, disposed of, or reused without disturbing or damaging the RACM; the component is encased in a **leak-tight** wrapping; and the leak-tight wrapping is properly labeled during loading, unloading, and storage.

If a facility is demolished by intentional burning (e.g., fire training), all ACM including Category I and Category II nonfriable ACM is regulated and must be removed before burning.

Remove all RACM from a facility being demolished or renovated before any activity begins that would break up, dislodge, or similarly disturb the material. When stripping asbestos from a facility component while it remains in place in the facility, **adequately wet** the asbestos. After a facility component that is covered with asbestos is taken out of a facility, it shall be stripped or contained in leak-tight wrapping. When stripping, adequately wet the component or use a local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material.

The following requirements must be followed for RACM, including material that has been removed or stripped:

- ✓ Adequately wet the material and ensure that it remains adequately wet until collected and contained or treated in preparation for disposal;
- ✓ Carefully lower the material to the ground and floor, not dropping, throwing, sliding, or otherwise damaging or disturbing the material; and
- ✓ Transport the material to the ground via leak-tight chutes or containers if it has been removed or stripped more than 50 feet above ground level and was not removed as units or in sections.

There are two situations for which the requirement for adequately wetting the material does not apply. The first case is when the temperature at the point of wetting is below 32° F. The temperature must be recorded at the beginning, middle, and end of each work day; and these records must be kept for two years. The second situation involves renovation operations where wetting would unavoidably damage equipment or present a safety hazard. For these operations, written approval must be obtained from EGLE (submit a request for a waiver for not wetting in writing to EGLE [address listed in "Where to Get Additional Information" section on page 10]), and the following emission control methods must be used:

(1) A local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material;

(2) A glove-bag system designed and operated to contain the particulate asbestos material; and

(3) Leak-tight wrapping to contain all RACM prior to dismantlement.

WASTE DISPOSAL

The Asbestos NESHAP specifies that no **visible emissions** can be discharged to the outside air from the collection, processing, transport, and disposal of **asbestos-containing waste materials**. After wetting, seal all asbestos-containing waste material in leak-tight containers. If the waste will not fit into containers, it must be placed in leak-tight wrapping. Label the containers or wrapped materials being taken away from the facility using warning labels specified by the Occupational Safety and Health Administration (OSHA) and the U.S. DOT. The label should include the name of the **waste generator** and the location at which the waste was generated. Asbestos-containing waste materials must be deposited as soon as practical to an appropriate waste disposal site. Vehicles used to transport asbestos-containing waste materials must be marked during the loading and unloading of waste. U.S. DOT regulations require the proper identification number of "NA2212" be placed on shipping papers and package marking.

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Waste shipment records must be maintained by the owner or operator of a demolition/renovation operation. The following information is required on waste shipment records:

- ✓ Generator name, address, and telephone;
- ✓ Asbestos NESHAP program agency name and address;
- ✓ Quantity of asbestos-containing waste materials (cubic meters or cubic yards);
- ✓ A monitored emergency response telephone number for a person who is knowledgeable of the hazardous material being shipped and has comprehensive emergency response and incident mitigation information, or who has immediate access to a person with such knowledge;
- ✓ Waste disposal site operator name and telephone;
- ✓ Disposal site name and physical location;
- ✓ Transport date;
- ✓ Transporter name, address, and telephone; and
- ✓ Certification.

Provide a copy of the waste shipment record to the disposal site owner or operator at the time of delivery. If a copy of the waste shipment record signed by the owner or operator of the waste disposal site is not received by the waste generator within 35 days, contact the transporter and disposal site to determine the status of the waste shipment. Notify the AQD in writing if a signed waste shipment record is not received from the waste disposal site within 45 days. Keep a copy of all waste shipment records, including the signed copy, for at least two years.

Under Part 115 of Michigan Public Act 451 of 1994, as amended, administered by EGLE, all asbestos-containing material regulated by any state or federal regulations must be disposed of at a Type II (municipal solid waste) landfill. Asbestos-containing material that is nonfriable AND is not in poor condition or will not become friable at any time can be disposed of in a Type III (construction and demolition) landfill. Contact your local EGLE District Office or the Environmental Assistance Center (800-662-9278) if you have waste disposal questions.

TRAINING

Training is required by three different federal and state agencies when it comes to the handling of asbestos, its removal, and the transportation of the material as a hazardous waste. The Asbestos NESHAP requires at least one trained supervisor to be present when asbestos-containing material is stripped, removed, disturbed, or otherwise handled. Evidence of this training must be posted and made available for inspection at the demolition or renovation site. In addition to training supervisors, the LEO requires that asbestos workers receive training. For a list of certified trainers and/or for more information about LEO training requirements, contact the LEO Asbestos Program at 517-284-7680 or visit their website at **www.michigan.gov/asbestos**. Finally, Hazmat employers are required to certify and document that Hazmat employees (as defined in 49 CFR 171.8) receive training in accordance with 49 CFR Part 172, Subpart H and Part 177. The training requirements would apply to any employee that transports asbestos, offers asbestos for transportation, prepares asbestos for transportation, or certifies a shipping paper or manifest for transportation. U.S. DOT training requirements cover such topics as general awareness/familiarization with 49 CFR Chapter I, Subchapter C; function-specific training for employees; safety methods and emergency response procedures; and security awareness training for risks associated with the transport of hazardous materials.

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WHY COMPLY WITH THE ASBESTOS NESHAP

Compliance with the Asbestos NESHAP will reduce the public's and workers' exposure to asbestos and will keep facility owners and contractors operating within the law. Non-compliance with the NESHAP is a significant violation. The AQD attempts to reach a settlement with the owner and operator when violations of the Asbestos NESHAP occur. If a settlement acceptable to the U.S. EPA is not reached in a timely manner, the U.S. EPA may pursue enforcement action at the federal level. The U.S. EPA may decide to pursue an escalated enforcement action on its own. Violations of the NESHAP notification and work practice requirements may result in written warnings, administrative orders, civil penalties and/or criminal charges. Typically, violations are resolved with a consent order requiring the facility to pay a penalty and to comply with the regulations for all future demolitions or renovations. Some owners and operators who have knowingly violated the Asbestos NESHAP have been sentenced to prison terms.

WHERE TO GET ADDITIONAL INFORMATION

Additional information about asbestos is available on the Internet through the U.S. EPA's homepage (**www2.epa.gov/asbestos**). In addition, the Asbestos NESHAP notification form, guidelines for completing the form and regulations are located at **www.michigan.gov/air**. Select "Asbestos NESHAP Program". Questions about the federal OSHA standards or the state's asbestos compliance and training requirements can be obtained by visiting the LEO Asbestos Program's web site at **www.michigan.gov/asbestos**. Questions related to the transportation of asbestos can be addressed by the U.S. Department of Transportation's (U.S. DOT) Hazmat Information Center at 800-467-4922. You can also visit the U.S. DOT, Pipeline and Hazardous Materials Safety Administration's web site at **http://hazmat.dot.gov**.

- ***Government Agency Contacts***:

Michigan Department of Environment, Great Lakes, and Energy
Air Quality Division – NESHAP Asbestos Program
PO Box 30260
Lansing, Michigan 48909-7760
Notifications & General Asbestos Questions: 517-899-2182

Michigan Department of Labor and Economic Opportunity
MIOSHA Asbestos Program
PO Box 30671
Lansing, Michigan 48909-8171
Main Line & General Asbestos Questions: 517-284-7680
Accreditation, Training, Contractor Licensing: 517-284-7698
Notifications: 517-284-7699

Michigan State Police
Commercial Vehicle Enforcement Division
Hazardous Materials Unit
PO Box 30634
Lansing, Michigan 48913-0635
517-241-0551

U.S. Environmental Protection Agency
Asbestos Program
77 W. Jackson Boulevard
Chicago, Illinois 60604
Asbestos Hotline: 1-800-368-5888
Environmental Hotline: 1-800-621-8431

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ACRONYMS

ACM ..... Asbestos-Containing Material
AQD..... Air Quality Division
CAA..... Clean Air Act
C&E..... Compliance and Enforcement
EGLE..... Michigan Department of Environment, Great Lakes, and Energy
LEO ..... Michigan Department of Labor and Economic Opportunity
NESHAP..... National Emission Standards for Hazardous Air Pollutants
OSHA ..... Occupational Safety and Health Administration
PLM..... Polarized Light Microscopy
RACM..... Regulated Asbestos-Containing Material
U.S. DOT.....U.S. Department of Transportation
U.S. EPA ..... U.S. Environmental Protection Agency

DEFINITIONS

This section contains a list of definitions from the Asbestos NESHAP. Not all of these terms are used in this fact sheet.

Active waste disposal site: Any disposal site other than an inactive site.

Adequately wet: Sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

Asbestos: The asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cumm ingtonite-grunerite, anthophylite, and actinolite-tremolite.

Asbestos-containing materials: Any materials containing more than 1% asbestos.

Asbestos-containing waste materials: Mill tailings or any waste that contains commercial asbestos and is generated by a source subject to the Asbestos NESHAP. This includes filters from control devices, friable asbestos waste material, and bags or other similar packaging contaminated with commercial asbestos. As applied to demolition and renovation operations, this term also includes regulated asbestos-containing material waste and materials contaminated with asbestos including disposable equipment and clothing.

Asbestos mill: Any facility engaged in converting, or in any intermediate step in converting, asbestos ore into commercial asbestos. Outside storage of asbestos material is not considered a part of the asbestos mill.

Asbestos tailings: Any solid waste that contains asbestos and is a product of asbestos mining or milling operations.

Asbestos waste from control devices: Any waste material that contains asbestos and is collected by a pollution control device.

Category I nonfriable asbestos-containing material (ACM): Asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1% asbestos as determined using Polarized Light Microscopy.

Category II nonfriable ACM: Any material, excluding Category I nonfriable ACM, containing more than 1% asbestos as determined using Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Commercial asbestos: Any material containing asbestos that is extracted from ore and has value because of its asbestos content.

Cutting: To penetrate with a sharp-edged instrument and includes sawing, but does not include shearing, slicing, or punching.

Demolition: The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

Emergency renovation operation: A renovation operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. This term includes operations necessitated by nonroutine failures of equipment.

Fabricating: Any processing (e.g., cutting, sawing, drilling) of a manufactured product that contains commercial asbestos, with the exception of processing at temporary sites (field fabricating) for the construction or restoration of facilities. In the case of friction products, fabricating includes bonding, debonding, grinding, sawing, drilling, or other similar operations performed as part of fabricating.

Facility: Any institutional, commercial, public, industrial, or residential structure, installation, or building (including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative but excluding residential buildings having four or fewer dwelling units); any ship; and any active or inactive waste disposal site. For purposes of this definition, any building, structure, or installation that contains a loft used as a dwelling is not considered a residential structure, installation, or building. Any structure, installation, or building that was previously subject to the Asbestos NESHAP is not excluded, regardless of its current use or function.

Facility component: Any part of a facility including equipment.

Friable asbestos material: Any material containing more than 1% asbestos as determined using Polarized Light Microscopy, that when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

Fugitive source: Any source of emissions not controlled by an air pollution control device.

Glove bag: A sealed compartment with attached inner gloves used for the handling of asbestos-containing materials. Properly installed and used, glove bags provide a small work area enclosure typically used for small-scale asbestos stripping operations.

Grinding: To reduce to powder or small fragments and includes mechanical chipping or drilling.

Hazmat employee: Means a person who is employed by a hazmat employer and who, in the course of employment, directly affects hazardous materials transportation safety. This term includes an owner-operator of a motor vehicle which transports hazardous materials in commerce. This term includes an individual, including a self-employed individual, employed by a hazmat employer who, during the course of employment:

1. Loads, unloads, or handles hazardous materials;
2. Manufactures, tests, reconditions, repairs, modifies, marks, or otherwise represents containers, drums, or packagings as qualified for use in the transportation of hazardous materials;
3. Prepares hazardous materials for transportation;
4. Is responsible for safety of transporting hazardous materials; or
5. Operates a vehicle used to transport hazardous materials.

Hazmat employer: Means a person who uses one or more employees in connection with: transporting hazardous materials in commerce; causing hazardous materials to be transported or shipped in commerce; or representing, marking, certifying, selling, offering, manufacturing, reconditioning, testing, repairing, or modifying containers, drums, or packagings as qualified for use in the transportation of hazardous materials. This term includes an owner-operator of a motor

vehicle which transports hazardous materials in commerce. This term also includes any department, agency, or instrumentality of the United States, a state, a political subdivision of a state, or an Indian tribe engaged in an activity described in the first sentence of this definition.

In poor condition: The binding or the material is losing its integrity as indicated by peeling, cracking, or crumbling of the material.

Inactive waste disposal site: Any disposal site or portion of it where additional asbestos-containing waste material has not been deposited within the past year.

Installation: Any building or structure or any group of buildings or structures at a single demolition or renovation site that is under the control of the same owner or operator (or owner or operator under common control).

Leak-tight: Solids or liquids cannot escape or spill out. It also means dust-tight.

Malfunction: Any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner so that emissions of asbestos are increased. Failures of equipment shall not be considered malfunctions if they are caused in any way by poor maintenance, careless operation, or any other preventable upset conditions, equipment breakdown, or process failure.

Manufacturing: The combining of commercial asbestos—or, in the case of woven friction products, the combining of textiles containing commercial asbestos—with any other material(s), including commercial asbestos, and the processing of this combination into a product. Chlorine production is considered a part of manufacturing.

Natural barrier: A natural object that effectively precludes or deters access. Natural barriers include physical objects such as cliffs, lakes or other large bodies of water, deep and wide ravines, and mountains. Remoteness by itself is not a natural barrier.

Nonfriable asbestos-containing material: Any material containing more than 1% asbestos as determined using Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Nonscheduled renovation operation: A renovation operation necessitated by the routine failure of equipment, which is expected to occur within a given period based on past operating experience but for which an exact date cannot be predicted.

Outside air: The air outside buildings and structures, including, but not limited to, the air under a bridge or in an open air ferry dock.

Owner or operator of a demolition or renovation activity: Any person who owns, leases, operates, controls, or supervises the facility being demolished or renovated or any person who owns, leases, operates, controls, or supervises the demolition or renovation operation, or both.

Particulate asbestos material: Finely divided particles of asbestos or material containing asbestos.

Planned renovation operations: A renovation operation, or a number of such operations, in which some RACM will be removed or stripped within a given period of time and that can be predicted. Individual, nonscheduled operations are included if a number of such operations can be predicted to occur during a given period of time based on operating experience.

Regulated asbestos-containing material (RACM): means (a) friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

Remove: To take out RACM or facility components that contain or are covered with RACM from any facility.

Renovation: Altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component. Operations in which load-supporting structural members are wrecked or taken out are demolitions.

Resilient floor covering: Asbestos-containing floor tile, including asphalt and vinyl floor tile and sheet vinyl floor covering containing more than 1% asbestos as determined using Polarized Light Microscopy.

Roadways: Surfaces on which vehicles travel. This term includes public and private highways, roads, streets, parking areas, and driveways.

Strip: To take off RACM from any part of a facility or facility components.

Structural member: Any load-supporting member of a facility, such as beams and load supporting walls, or any nonload-supporting member, such as ceilings and nonload-supporting walls.

Visible emissions: Any emissions, which are visually detectable without the aid of instruments, coming from RACM or asbestos-containing waste material, or from any asbestos milling, manufacturing, or fabricating operation. This does not include condensed, uncombined water vapor.

Waste generator: Any owner or operator of a source covered by the Asbestos NESHAP whose act or process produces asbestos-containing waste material.

Waste shipment record: The shipping document, required to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.

Working day: Monday through Friday and includes holidays that fall on any of the days Monday through Friday.

TMMC **CHANGE NOTICE**	**TYPE OF CHANGE** ☒ ICN ☐ Procedure Cancellation ☐ Procedure Hold ☐ Hold Cancellation

Affected Procedure Title, Number and Revision Number:

DOC-003/Rev. 12, TMMC Material Acceptance Criteria

CN Number: *CN19-01*	**Effective Date:** *1/14/2019*
Description of Change:	**ICN Expiration Date:** *None*

Replace the second paragraph of Appendix A, page 2, with the following:

"Paper product containers, including fiberboard drums and corrugated fiberboard boxes, when used as an outer container, are considered Non-Standard items for delivery to TMMC. Pre-approval of paper product containers must be requested by the customer on an Appendix B, "Non-Standard Radioactive Material Acceptance Form" and approved by the RSO and/or Vice President-TMMC prior to shipment to TMMC."

Prepared By: *Signature on original*	**Date:** *1/14/2019*
Technical Review: *Signature on original*	**Date:** *1/14/2019*
QA Review: *Signature on original*	**Date:** *1/14/2019*
Approved (License User): *Signature on original*	**Date:** *1/14/2019*
VP/GM (Procedure Cancellation):	**Date:**

Toxco Materials Management Center

Material Acceptance Criteria

DOC-003

Revision 12

Prepared By:	*Signature on original*	*7/23/2018*
	Greg Kirk, QA Manager	Date
Reviewed By:	*Signature on original*	*7/23/2018*
	Stacy Low, Administration Manager	Date
Reviewed By:	*Signature on original*	*7/23/2018*
	Alan Duff, Radiation Safety Officer	Date
Approved By:	*Signature on original*	*7/23/2018*
	Rick Low, Vice President – TMMC/General Manager	Date

Table of Contents

1.0 Scope

This material acceptance criteria provides detailed criteria for the acceptance of radioactive material and radioactive waste for storage or processing at the Toxco Materials Management Center (TMMC) in Oak Ridge, Tennessee. It applies to all shipments of radioactive material made to the TMMC. It specifies the requirement for advance shipment notification and provides the mechanism for evaluation of material which does not meet the standard acceptance criteria specified in Appendix A of this Material Acceptance Criteria (MAC).

2.0 Policy

TMMC will accept material for storage or processing which meets standard acceptance criteria, can be safely stored or processed, and meets TMMC license and contractual criteria. Material which does not meet general or specific acceptance criteria included in this MAC may be accepted after evaluation and approval by the TMMC Radiation Safety Officer.

3.0 Responsibilities

3.1 The TMMC Radiation Safety Officer (RSO) is responsible for establishing radiological criteria to ensure that TMMC can receive and process radioactive material in accordance with applicable licenses, permits, and regulations. The Radiation Safety Officer will assist in determining that material meets Department of Transportation regulations and (for waste or material which when processed generates waste) burial site criteria.

3.2 The TMMC RSO or designee is responsible for evaluating Advance Shipment Notification (ASN) forms and assuring that the proposed shipment meets the standard acceptance criteria.

3.3 The Vice President – TMMC is responsible for determining how material in a proposed shipment can be safely processed and insuring that a proposed shipment will not cause fence-line dose limits to be exceeded while in storage.

4.0 Definitions

4.1 Radioactive Equipment – Radioactive equipment is non-waste material received for storage, processing, decontamination, or maintenance at TMMC's site.

4.2 Radioactive Waste – Radioactive waste is radioactive material that is waste intended for processing or storage with subsequent disposal or return to the customer as waste. Note that waste requires manifesting as waste by NRC regulations in 10 CFR 20 Appendix G (or equivalent state regulations.)

4.3 Standard Radioactive Material – Radioactive material (equipment or waste) that meets the general or specific material acceptance criteria in Appendix A in this MAC.

4.4 Non-standard Radioactive Material – Radioactive material which deviates from the general or specific acceptance criteria in Appendix A and requires submittal for further review prior to approval.

4.5 Dry Active Waste (DAW) – Radioactive waste consisting primarily of paper, plastic, cloth, rubber, wood, metal, etc., is dry active waste. This excludes resins, sludges, wet filter media, aqueous liquids, oils, etc.

4.6 Natural Uranium (U-Nat) – As used in this document U-Nat means: Natural material and ores containing naturally occurring radionuclides existing in nature, not produced by humans.

5.0 **NOTICE** – TN Division of Radiological Health (TDRH) and Radioactive Material License Requirements

5.1 TDRH Fee (Tax)

In accordance with the TDRH (ref: Rule 0400-20-10-.31(8) (d)), Toxco must collect and remit to the State of Tennessee a fee (tax) of two cents per pound ($0.02/lb.) on all items contaminated or potentially contaminated with radioactive material or low-level radioactive waste received at TMMC from a customer.

5.2 License for Delivery

Toxco's Radioactive Material License Condition 18 states, "TMMC shall not accept either radioactive waste and/or items contaminated or potentially contaminated with licensable quantities of radioactive material or radioactive materials or items from licensable activities for repackaging, processing, refurbishing, storage pending disposal or disposal unless the shipper of such waste possesses a valid license for delivery issued pursuant to 0400-20-10-.32 of "State Regulations for Protection Against Radiation."

5.3 Right to Return Radioactive Materials

5.3.1 Toxco's Radioactive Material License Condition 19 states, "Written assurances must be furnished by the facility shipping the radioactive material indicating that the facility may accept return of the material processed or unprocessed."

5.3.2 Toxco's Radioactive Material License Condition 20 states, "The licensee shall establish in every contractual obligation relating to radioactive materials the ability to return radioactive materials, processed or unprocessed, to the prior licensed or exempt possessor."

6.0 Acceptance of Standard Radioactive Material

6.1 Standard radioactive material acceptance criteria are in Appendix A. Materials meeting these criteria require that the customer's Representative submit a completed Advance Shipment Notification (ASN) (Appendix C) in accordance with section 8.0 of this MAC prior to shipping.

6.1.1 Each completed ASN that indicates the shipment(s) contains material from compact states requiring export permits must have each corresponding export permit letter(s) attached to the ASN or with the associated manifest when the material arrives at the TMMC site.

6.1.2 Each completed ASN indicating the shipment contains U-Nat must ensure that the U-Nat meets the definition listed in section 4.6 above. Shipped uranium not meeting the definition of U-Nat herein shall be manifested by each applicable uranium nuclide.

6.1.3 Shipments arriving at the TMMC that do not meet the requirements of 6.1 and 6.1.1 above SHALL NOT be permitted access to the TMMC site.

6.2 Radioactive material meeting the acceptance criteria may be delayed if receipt would cause radioactive material inventory limits to be exceeded. Other business or process related factors may cause delay. The TMMC RSO will inform customer's Radioactive Material Manager if any of these factors will cause a delay in shipping at the time of review of the ASN.

6.3 Approval for shipment of standard radioactive material is made by the TMMC RSO, who will return a copy of the approved ASN to the customer's Radioactive Material Manager prior to shipment.

7.0 Acceptance of Non-standard Radioactive Material

7.1 Not all radioactive material meets the standard acceptance criteria. In many cases, TMMC may still be able to receive this non-standard material. It is important that non-standard material receive special approval prior to shipment to ensure that the material can be processed safely, license/permits limits are not exceeded, radiation and radioactive material exposures to TMMC personnel can be minimized, and the material can be processed by the method requested by the customer. This review and approval will also insure that a specific contract/purchase order is in place. TMMC may accept non-standard material by the following steps.

7.1.1 The Vice President – TMMC will work with the customer to determine and document information required by the Non-standard Radioactive material Acceptance Form (NRAF).

7.1.2 The Radiation Safety Officer will review the NRAF considering ALARA and safety, regulatory/license/permit limitations, and waste disposal/shipping.

7.1.3 When review of the NRAF is complete and appropriate approvals are obtained, the TMMC RSO will notify the customer.

8.0 Shipment Scheduling

8.1 5 Working-Day Advanced Shipment Notification

Customers must schedule the shipment to arrive at the facility a minimum of five (5) working days prior to the requested shipment arrival date. A complete Advance Shipment Notification (ASN) [1]package must be sent to Shipping@toxcommc.com to establish an arrival date for each shipment. The ASN form may be downloaded from TMMCs' website at www.toxcommc.com. Once the ASN package has been received and accepted by TMMC, the shipment's arrival date will be confirmed with the shipper. If all required information is not available at the time of submission, updates may be provided as the information becomes available. TMMC must be informed in the event that there are delays in the shipment scheduled arrival date.

8.2 Shipping Paperwork

Advance copies of the Uniform Low-Level Radioactive Waste Manifest (Forms 540/541, and 542 if applicable) and Bills of Lading, as appropriate, must be submitted electronically in LowTrack compatible *format via email to Shipping@toxcommc.com. Hard copies may be faxed to "Shipping and Receiving – Manifest" at (865) 482-5605.

*See note on page three (3) of Appendix C for "Administrative Fees" associated with the submittal of non-compatible electronic manifests/shipping papers.

8.3 Receiving Hours of Operation

Shipments are typically received at the TMMC site Monday through Friday from 7:30 A.M. to 11:30 A.M and 1:00 P.M. hours to 4:30 P.M. Alternate receipt arrangements must be approved in advance. Contact the TMMC-VP at Shipping@tmmc.com to arrange for alternate receipt hours.

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[1] A complete Advanced Shipment Notification package includes a completed ASN form (Appendix C) and an electronic manifest(s) file in LowTrack format.

8.4 Holidays

TMMC is closed for business on:

- New Years Day;
- Memorial Day;
- Independence Day;
- Labor Day;
- Thanksgiving Day and the day after; and
- Christmas Day

9.0 Records

Completed forms generated as a result of this document are project records and shall be retained with the appropriate shipment file.

STANDARD ACCEPTANCE CRITERIA

Applicability

These are general criteria for all material received at the TMMC. Each of TMMC's processing methods has specific criteria that must also be met.

RCRA Limits

TMMC is not a permitted Treatment, Storage, or Disposal Facility (TSDF) under RCRA regulations.

Radiological Limits

All incoming material shall meet Class A waste acceptance criteria, unless the waste has been approved per Appendix B; "*Non-standard Radioactive Material Acceptance Form*" by both the Radiation Safety Officer and Vice President – TMMC.

The radiological material acceptance criteria at the Toxco Materials Management Center (TMMC) are determined by the amount of each radionuclide or groups of radionuclides on site at any one time. To ensure compliance with our Tennessee radioactive materials license each manifest of radioactive material must be reviewed and compared to the current site inventory.

TMMC maximum on site inventory is:

	Material Radioactive	**Maximum Radioactivity (Curies) or Quantity (grams)**
1.	Hydrogen 3	1500 Curies
2.	Carbon 14	50 Curies
3.	Fe-55	100 Curies
4.	Ni-63	100 Curies
5.	Radioactive materials with atomic numbers 93 and 95-100 inclusive	100 Curie
6.	Radioactive materials with atomic numbers 84-91 inclusive (excluding Source material)	10 Curies
7.	Source Material (natural or depleted uranium, thorium)	19 Curies
8.	Mixed activation and fission products with atomic numbers 3-83 (excluding C-14, Fe-55, Ni-63)	200 Curies
9.	Uranium-233	200 grams*
10.	Uranium-235	350 grams*
11.	Plutonium	200 grams* or 2 Curies

*Special nuclear material shall not exceed unity of "1"

Packaging

All material shall be packaged per U.S. Department of Transportation regulations 49 CFR 173 sub-part I. Package radiological conditions must be in accordance with U.S.D.O.T. criteria.

Paper product containers, including fiberboard drums and corrugated fiberboard boxes, when used as an outer container, IS NOT ACCEPTABLE for delivery to TMMC. Paper product containers arriving at TMMC will be rejected as nonconforming material.

Material should be loaded so that it may be removed from the delivering vehicle by fork truck. Containers should be arranged on flat bed trailers so that a fork truck can unload from the side. Materials requiring a crane for off-loading (items < 40,000 pounds on a flat bed excepted) require specific prior approval.

Shipments containing items greater than 40,000 pounds and casks must be pre-approved and documented by the RSO and Vice President-TMMC on an Appendix B.

SHIPPING DOCUMENTATION

Advance Notification

See Section 8.0 above.

Radioactive Material Manifest:

Radioactive material must be accompanied by a manifest (when required) that meets the current NRC and DOT requirements for the material being transported. Low level radioactive waste intended for ultimate disposal at a licensed low-level radioactive waste land disposal facility must be manifested on applicable NRC Low Level Waste Manifest forms 540, 541 and 542. If not included in a manifest, additional documentation must be provided that identifies each package or bulk container by a unique number and supplies the following information for each package:

- Radionuclides and activity of each radionuclide (minimum listing is that required by 49 CFR 173.433;
- Detailed description of contents such as: serial numbers and inventory with contamination levels for equipment; or composition % paper, plastic, cloth, wood, metal, resin (provide the specific activity in μCi/cc for each isotope present in resins), etc. for waste,
- Estimated weight and volume,
- Grams of Special Nuclear Material,
- Radiation levels and removable contamination levels,
- Any special conditions that require precautionary handling requirements.

Permits

Waste defined as low-level radioactive waste in accordance with the Low-Level Radioactive Waste Policy Amendments Act of 1985 or in DOE Order 435.1 requires a copy of a LLRW Compact Export letter to be submitted, if applicable.

All radioactive shipments shall include a current and valid Tennessee License for Delivery permit number.

EQUIPMENT STORAGE ACCEPTANCE CRITERIA

Applicability

These criteria apply to equipment received for storage/maintenance/repair/decontamination (not intended for waste processing).

The customer must certify that the equipment has a continuing use and value (other than scrap value).

Equipment will be packaged in containers that meet US Department of Transportation (DOT) regulations 49 CFR 173, subpart I (minimum requirement is 49 CFR 173.410)

COMPACTABLE DAW STANDARD ACCEPTANCE CRITERIA

Applicability

These criteria apply to Dry Active Waste (DAW) intended for compaction. These criteria also apply to the compactable portion of shipments consisting of commingled compactable and non-compactable wastes.

DAW suitable for compaction includes paper, plastic, and cloth. DAW must meet the criteria for Low Specific Activity (LSA) in 49 CFR 173.403.

Non-Standard Material Examples

The following wastes are non-standard for compaction:

- RCRA/TSCA Hazardous Wastes
- Explosives
- Pyrophoric material
- Liquid
- Biological Materials
- Resins
- Material with a dose rate greater than 400 mR/hr on contact.
- Gas cylinders
- Flammable solids
- Absorbed Liquids
- Sludges
- Radioactive Sealed Sources

NON-COMPACTABLE DAW STANDARDACCEPTANCE CRITERIA

Applicability

These criteria apply to non-compactable waste and to equipment that will be scrapped following decontamination or processing.

Non-Standard Material

Wastes or equipment containing the following are non-standard for processing:

- RCRA/TSCA Hazardous Wastes
- Explosives
- Pyrophoric material
- Gas cylinders
- Gas sources
- Flammable solids
- Components with a stored energy source (i.e., snubbers, springs, compressed air or liquids).
- Material with a dose rate greater than 400mR/hr on contact.

NON-STANDARD RADIOACTIVE MATERIAL ACCEPTANCE FORM

CUSTOMER INFORMATION

Company:_____ Plant/Unit #_____

Address:_____

Address:_____ Contact person:_____

Telephone:_____ Facsimile:_____ e-mail:_____

Material description:_____

_____

_____

_____

_____

_____

_____

TMMC ACCEPTANCE AUTHORIZATION

Conditions for acceptance:_____

_____

_____

_____

_____

_____

Vice President – TMMC_____ _____
Signature Date

Radiation Safety Officer_____ _____
Signature Date

ADVANCE SHIPMENT NOTIFICATION

Generator: _____ TN License for Delivery ID: _____

Shipment Weight: _____ [2]Net Material/Waste Weight: _____ Total Activity (mCi): _____

Highest Contact Dose Rate: _____ SNM Grams: _____ ***≥ 0.5gm requires DOE/NRC Form 741**

A) **Material Properties**: ☐ **WASTE** ☐ **RECYCLABLE**

1. Physical State: ☐ Solid ☐ Semi-Solid ☐ Powder/Dust ☐ Free Liquid ☐ Other: _____
2. Flash Point (°F): ☐ ≤ 72° ☐ >72° - 100° ☐ >100° - 140° ☐ >140° - 200° ☐ > 200° ☐ N/A
3. Reactivity: ☐ Water Reactive ☐ Acid Reactive ☐ Alkaline Reactive ☐ Oxidizer ☐ Pyrophoric ☐ Explosive ☐ Shock Sensitive ☐ Thermally Sensitive ☐ Autopolymerizable ☐ N/A
4. Odor - describe:_____ ☐ None ☐ Mild ☐ Strong
5. pH: ☐ ≤ 2 ☐ 2.1 - 5.0 ☐ 5.1 - 9.0 ☐ 9.1 - 12.4 ☐ ≥ 12.5 ☐ N/A
6. Contains Asbestos?: ☐ Yes ☐ No If Yes, Is the Asbestos Friable?: ☐ Yes ☐ No

B) Does the material contain, or is it suspected to contain any of the following: ☐ Yes ☐ No

☐ Free Cyanide ☐ Free Sulfide ☐ Organic Compounds ☐ OSHA Substances ☐ Infectious Agents
☐ Virgin Oils ☐ Used Oils ☐ PCBs ☐ Oxidizing Agents ☐ Solvents
☐ Pesticides ☐ Reducing Agents ☐ Volatile Organics ☐ Herbicides

---

Waste Material

C) Is the waste subject to LLRW Compact Export Approval?: ☐ Yes ☐ No
The following states require permits: AK, AZ, CA, CO, HI, ID, MT, NV, NM, ND, OR, SD, TX, UT, VT, WA, WY
(If yes, list generators and **attach permits**.)_____

***** Waste received without a Required Export Permit or NORM Exemption Letter WILL BE REJECTED at TMMC *****

D) Is this waste a characteristic hazardous waste per 40 CFR 261.21 - 24? ☐ Yes ☐ No
Has a TCLP analysis been performed? ☐ Yes ☐ No (If yes, attach the results.)

E) Is this waste an F, K, P, or U Listed hazardous waste per 40 CFR 261.31-33? ☐ Yes ☐ No ☐ N/A

F) Is this waste derived from the treatment, storage or disposal of hazardous waste as described in 40 CFR 261?
☐ Yes ☐ No If yes, explain:_____

G) Is this a "Hazardous Waste" as defined by State, Provincial, or Local Regulations? ☐ Yes ☐ No
If yes, enter the waste identification number, if one has been assigned:_____

H) If the waste is a sewer sludge, has analyses been performed in accordance with 40 CFR 503.8 ☐ Yes ☐ No
(If yes, please submit a copy of the analyses.) If no, explain why sampling has not been performed:
_____

I) Does the shipment meet or exceed the NRC Quantities of Concern Criteria? ☐ Yes ☐ No

J) Does the shipment contain Natural Uranium (U-Nat) as defined in the TMMC MAC section 4.6? ☐ Yes ☐ No

---

[2] The TDRH $0.02/lb. fee will be assessed based upon the net material/waste weight listed in this section. (Ref. TMMC MAC section 5.1)

ADVANCE SHIPMENT NOTIFICATION

Customer Shipment ID: _____ Customer Ref. PO _____ Est. Arrival Date _____

SERVICE OPTIONS

- ☐ Asbestos
- ☐ Best Way
- ☐ Bonded Space Lease
- ☐ Bulk Survey For Release (BSFR)
- ☐ Container Rental/Lease/Repair
- ☐ DAW
- ☐ Lead
- ☐ Liquids - ☐ Oil ☐ Water
- ☐ Metals
- ☐ PCB Capacitors
- ☐ Resin
- ☐ Sort & Segregate
- ☐ Special: (Describe Below)
- ☐ Storage of Asset Materials
- ☐ Survey for Release

NOTES: _____

FINAL DISPOSITION OPTIONS

☐ Unrestricted Release* ☐ Recycle/Reuse* ☐ BSFR ☐ Energy*Solutions* ☐ Return To Customer

NOTES: _____

* ***Surface Contamination Only. No activated materials are permitted.***

SPECIAL HANDLING

☐ Live Offload ☐ Laboratory Analysis ☐ Increased Controls

NOTES: _____

CONTAINER DISPOSITION

☐ TMMC Owned ☐ Dispose of Container ☐ Return Container(s) to: (List Below)

NOTES: _____

SERVICE TYPE

☐ [3]Standard ☐ [4]Expedited

NOTES: _____

[3] Length of services: Standard Services takes up to 365 days from site arrival to complete.
[4] For "Expedited Service" (i.e., the Customer's service must be completed within 1 to 90 days from the date of receipt) shall be assessed an additional 50% charge applied to the standard services rate.

[5]**Advanced Shipment Notification:** Customers must submit and have approved an Advanced Shipment Notification (ASN) form five (5) working days prior to the associated shipment's arrival at the TMMC.

Administrative Fees: Customers who do not submit LowTrack compatible electronic shipping papers shall be assessed an administrative document handling fee at standard professional staff billing rates per submitted manifest/shipping paper.

[6] **Customer's Certification**: *I certify that all information submitted on this form is complete and accurate and that material being offered is in compliance with the TMMC Material Acceptance Criteria (MAC). Additionally, I acknowledge and agree that TMMC must, in accordance with its Tennessee Radioactive Materials License, retain the right to return radioactive material (processed or unprocessed) to the prior licensed or exempt processor (e.g., generator).*

Customer Representative Printed Name	Signature	Title

Email completed ASN forms to Shipping@toxcommc.com or fax the information to 865-482-5605. Phone: 865-482-5532. To expedite our review, please attach applicable laboratory analyses, SDSs and any additional information regarding this material.

Toxco Approval Signature	Date	TMMC Shipment ID

[5] A complete Advanced Shipment Notification includes: A completed ASN form, completed ASN form (Appendix C) and an electronic manifest(s) file in LowTrack format.

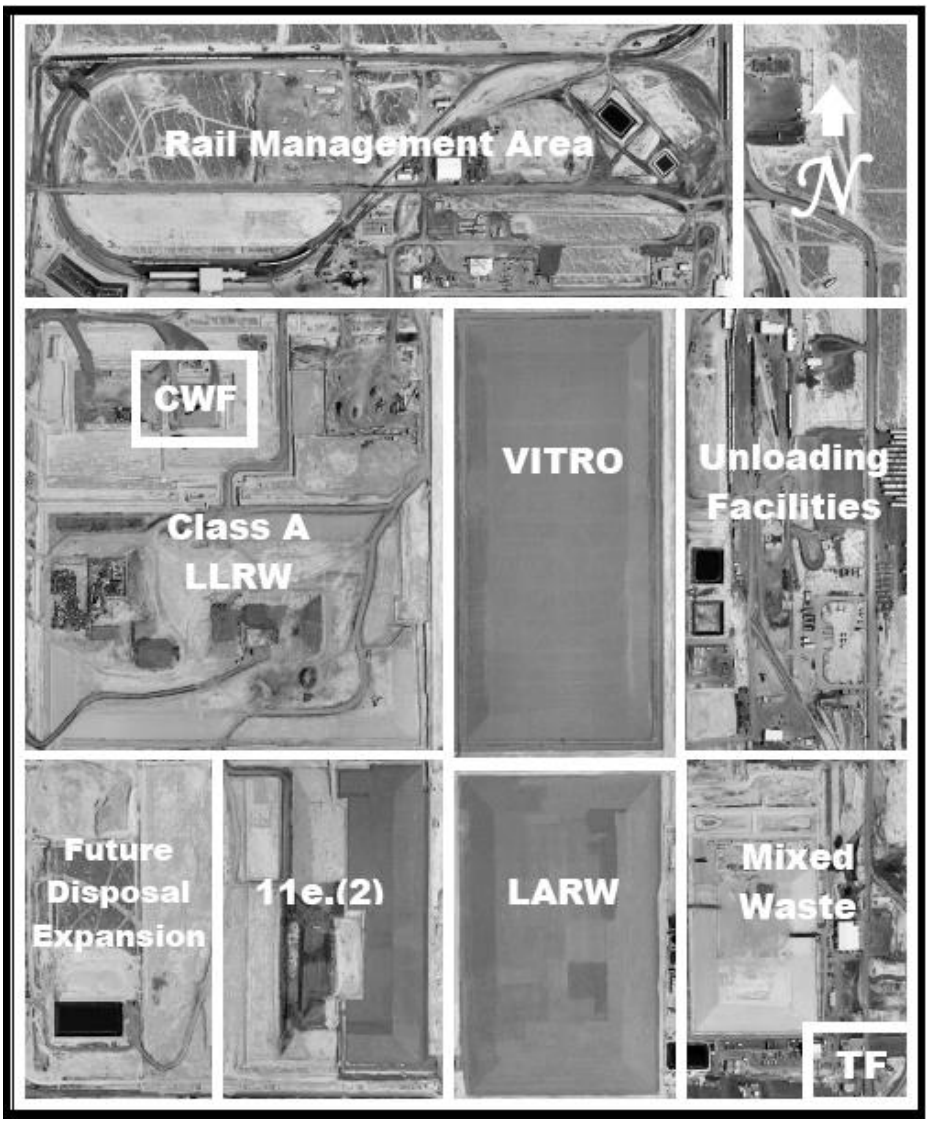
[6] Material received at the TMMC that is determined to be not as represented on this ASN or other associated contractual document is considered to be nonconforming and will be subject to rejection and return unless TMMC and the customer establish an acceptable alternative.

Energy*Solutions* Clive, Utah

Bulk Waste Disposal and Treatment Facilities Waste Acceptance Criteria

Revision 10

(Includes Class A LLRW, Mixed Waste, and 11e.(2) Disposal Embankments)



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SECTION 6 PACKAGING AND TRANSPORTATION

APPENDIX A CONTACT INFORMATION

SECTION 1

INTRODUCTION

1.1 PURPOSE

Energy*Solutions* has developed this Bulk Waste Disposal and Treatment Facilities – Waste Acceptance Criteria (BWF WAC) document to assist waste generators and their contractors by providing information about the capabilities and requirements of Energy*Solutions*' Clive, UT disposal and treatment facilities. Energy*Solutions* is authorized to receive:

- Class A Low-Level Radioactive Waste (LLRW)
- NORM/NARM
- Class A Mixed LLRW (i.e., radioactive and hazardous)
- 11e.(2) Byproduct Material
- PCB Radioactive, and
- Other various forms and types of radioactive wastes

The BWF WAC provides information on Energy*Solutions*' waste acceptance processes including:

- Waste characterization and profiling,
- Pre-shipment sampling and analysis,
- Waste packaging, transportation and delivery,
- Waste receipt, verification sampling and acceptance, and
- Waste treatment and disposal

These waste acceptance criteria collectively pertain to the Bulk Waste and Treatment Facilities which are described in detail below. Energy*Solutions* new online Customer Portal website allows users to enter all of the waste profiling information, schedule requests for shipments, and validation of uploaded manifests. The BWF WAC does not apply to Energy*Solutions*' Containerized Waste Facility (CWF). Please refer to the CWF WAC which can be downloaded from the Customer Portal at Energy*Solutions*' website at www.energysolutions.com.

1.2 SCOPE

Numerous state and federal agencies regulate the management, transportation, treatment and disposal of radioactive and hazardous materials. This document provides guidance on Energy*Solutions*' waste acceptance process and should be used in conjunction with current copies of Energy*Solutions*' licenses, permits and applicable state and federal regulations. These licenses, permits, and regulations take precedence over any information contained in this document. Generators may request variances from the BWF WAC on a case-by-case basis. Energy*Solutions* will evaluate such requests and provide written notification to the generator if the variance is approved. In some cases, a variance may require state or federal regulatory approval.

Links to Energy*Solutions*' governing licenses and permits may be found at the Customer Portal on the Energy*Solutions*' website at www.energysolutions.com. In addition, Appendix A of this document contains a list of contact information for both Energy*Solutions* and the State of Utah. For additional information,

representatives of Energy*Solutions*' Technical staff are available to answer any questions and can be contacted at (801) 649-2000.

1.3 RESPONSIBILITIES

The generator is responsible to characterize, classify, schedule, manifest, package and transport waste shipments to Energy*Solutions*' disposal facility in accordance with the BWF WAC, licenses, permits, and applicable state and federal regulations. For waste classification, generators must have in place a quality control program to ensure compliance with the waste classification requirements. The generator or authorized representative must complete and submit a Radioactive Waste Profile Record to Energy*Solutions* for review and approval prior to shipment. Additional forms and certifications may also be required such as the Special Nuclear Material Exemption Certification, the PCB Waste Certification, and the Land Disposal Restriction Notification and/or Certification. Section 4 details the waste profiling process. The generator or authorized representative should be available to resolve issues that arise associated with waste shipments.

Energy*Solutions* is responsible to safely and compliantly receive, treat (if applicable), and dispose of waste shipments in accordance with all applicable permits, licenses, and regulations. Energy*Solutions* will provide disposal and/or treatment certificates upon request from the generator. In addition, Energy*Solutions* will contact the generator to resolve non-conforming waste shipments or discrepancies with the contractual terms and conditions associated with the receipt and management of waste shipments.

SECTION 2

SITE AND FACILITY DESCRIPTION

2.1 SELECTION OF THE CLIVE DISPOSAL SITE LOCATION

The initial selection of the Energy*Solutions* disposal site location dates back to the late 1970s when the Department of Energy (DOE) and the State of Utah began the cleanup of an abandoned uranium mill site. The VITRO mill site, located in central Salt Lake City, was one of the first sites cleaned up under the DOE Uranium Mill Tailings Remediation Action (UMTRA) Program.

The DOE investigated 29 sites to identify the safest permanent disposal site for these materials. After eight years of characterization and evaluation of several sites, the DOE selected the Clive site located in Utah's West Desert approximately 75 miles west of Salt Lake City. The site's remote location, low precipitation, naturally poor groundwater, and low-permeability clay soils were some of the attractive qualities of the area. From 1984 to 1988, the VITRO tailings were relocated to Clive and placed in an above-ground disposal cell.

Since acquiring land adjacent to the VITRO disposal embankment and obtaining a disposal license, the vision of Energy*Solutions*' Clive facility has been to provide a private disposal option for material from cleanups and generators of radioactive waste in separate disposal embankments similar to those used for DOE's VITRO project. The Clive site has received waste from cleanups carried out across the country including projects by the Environmental Protection Agency (EPA), Department of Energy (DOE), Department of Defense (DOD), utilities and other commercial entities. The initial disposal license was for Naturally Occurring Radioactive Material (NORM). Since 1988, Energy*Solutions*' Radioactive Material License (RML) has been amended several times, expanding the types of radioactive materials to include Class A low-level radioactive waste (LLRW), in addition to NORM.

2.2 LICENSES, PERMITS, AND AUTHORIZATIONS

Energy*Solutions* is permitted, licensed, and authorized to receive, treat, and dispose Class A LLRW, NORM/NARM, Class A Mixed LLRW, 11e.(2) Byproduct Material, Special Nuclear Material based on concentration limits, Polychlorinated Biphenyl (PCB) Radioactive Waste, and PCB Mixed Waste in accordance with the following documents. These documents are available for viewing at the Energy*Solutions* Customer Portal at www.energysolutions.com.

- Radioactive Material License (RML) Number UT 2300249, as amended
  - Class A LLRW as defined in Utah Administrative Code R313-15-1009
  - Class A Mixed LLRW (radioactive and hazardous)
  - NORM/NARM
  - Special Nuclear Material (concentration-based limits)

- 11e.(2) Byproduct Material License Number UT 2300478, as amended
  - 11e.(2) Byproduct Material as defined by the Atomic Energy Act, as amended

- State-Issued Part B Permit Number UTD982598898, as amended
  - Storage, treatment, and disposal of Mixed Waste
  - Authorizes disposal of specific types of PCB regulated waste in the LLRW and Mixed Waste disposal facility, depending upon the type and concentration of PCBs present in the waste

[note that this authority has been transferred from the Groundwater Discharge Permit to the RCRA Part B Permit]

- Special Nuclear Material (SNM) Exemption Order issued by the NRC, as amended
  - Authorizes receipt, storage, treatment, and disposal of waste containing SNM based on concentration limits rather than mass limits

- TSCA Coordinated Approval and TSCA Shredding Approval issued by the EPA Region 8, as amended
  - Authorizes the receipt, management, and disposal of PCB Radioactive and PCB Mixed Waste (40 CFR Part 761)

Section 3 details the various waste types and waste forms that are acceptable at Energy*Solutions*. Waste streams that are subject to multiple regulations must meet the requirements for each applicable regulation.

2.3 SITE LOCATION AND ACCESS

Energy*Solutions*' operations are conducted on and adjacent to Section 32, Township 1 South, Range 11 West, SLM, Tooele County, Utah. The facility is about 75 miles west of Salt Lake City and about three miles south of Interstate 80, Exit 49. The site is conveniently accessed by both highway and rail transportation. The disposal site mailing address is:

Energy*Solutions* LLC
Clive Disposal Site
Interstate 80, Exit 49
Clive, UT 84029 (84083 if using Fed Ex)
Phone: (801) 649-2175

Energy*Solutions* receives waste shipped via bulk truck, containerized truck, enclosed truck, bulk railcars, rail boxcars, and rail intermodals. The transportation access allows Energy*Solutions* to operate throughout the entire year. The disposal site is accessed by the Union Pacific Railroad at Energy*Solutions*' private siding. Energy*Solutions* uses more than ten miles of track and three locomotives for railcar management. The covered railcar thaw shed, rotary dumper, and railcar decontamination facilities allow for the efficient unloading, decontamination and return of rail shipments.

2.4 DISPOSAL AND TREATMENT FACILITIES

The design and operation of the Energy*Solutions* disposal site provides a long-term disposal solution with a minimal need for active maintenance after closure. Energy*Solutions* uses an above-ground engineered disposal cell. The design of these cells is patterned after DOE and EPA specifications for the VITRO disposal embankment. Each licensed disposal embankment meets or exceeds the applicable regulatory requirements.

Figure 2-1 shows the locations of Energy*Solutions*' waste treatment, disposal, and operations areas at the Clive facility. Clive waste operations are managed as three facilities:

- "Bulk Waste Facility" (BWF) – including Mixed Waste, LARW, 11e.(2) and Class A LLRW
- "Containerized Waste Facility" (CWF) – located within the Class A LLRW area
- "Treatment Facility" (TF) – located in the southeast corner of the Mixed Waste area

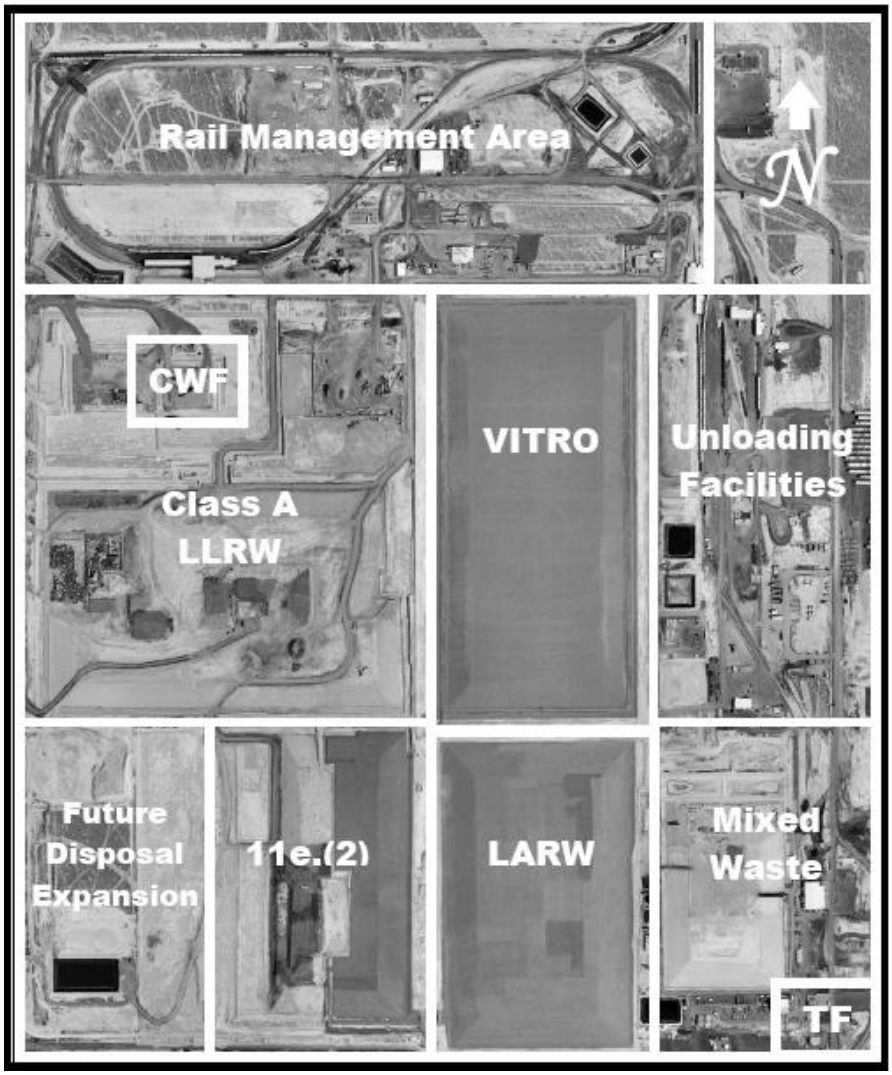


Figure 2-1. Energy*Solutions*' Disposal and Treatment Facilities

<u>Bulk Waste Facility</u>

Waste shipped for direct disposal that is compliant with the ALARA Criteria described below is managed at Energy*Solutions*' Bulk Waste Facility (BWF). Such waste is either removed from the container or filled with a grout-like mixture to minimize void spaces. Waste that is removed from the shipping container is typically compacted into soil lifts. For disposal in a bulk soil lift, debris must be less than 10 inches in at least one dimension and no longer than 12 feet in any dimension. Debris items that exceed this size limit are disposed of using grout in a different disposal area within the BWF. Waste is directly disposed at the Class A LLRW, Mixed Waste, or 11e.(2) disposal embankments. Bulk containers (e.g., intermodals, gondolas, etc.) and non-bulk containers (e.g., drums, boxes, etc.) are acceptable for receipt at the BWF.

The Bulk Waste Facility (BWF) includes the following disposal embankments and structures:

- Class A LLRW and NORM disposal embankment
- 11e.(2) Byproduct Material disposal embankment
- Mixed Waste disposal embankment for LDR compliant solid waste
- Intermodal unloading facility for unloading and staging bulk waste shipments for disposal
- Railcar Rotary Dump facility for unloading and staging bulk waste shipments for disposal
- Rail Wash Facility for decontamination, surveying, and releasing of railcars
- Container Wash Facility for decontamination, surveying and releasing of bulk containers

Containerized Waste Facility

Waste shipped for direct disposal exceeding Energy*Solutions*' ALARA Criteria is managed at the Containerized Waste Facility (CWF). Waste must be packaged in disposal containers (e.g., drums, boxes, liners, etc.) instead of bulk containers (e.g., intermodals, gondolas, etc.) for shipments to the CWF since Energy*Solutions* will not remove such waste from its container due to the elevated dose rates. Please refer to Energy*Solutions*' CWF WAC for information on shipping waste to the CWF.

Shipments to the CWF typically are shipped in a shielded transportation package such as a cask as illustrated in Figure 2-2.

Figure 2-2. Cask Shipment to the CWF

Treatment Facility

Waste shipped to Energy*Solutions* for treatment or liquid solidification/verification prior to disposal is managed at Energy*Solutions*' Treatment Facility. The Treatment Facility is shown in Figure 2-1 as "TF".

The Treatment Facility is designed for radioactive waste that requires treatment for RCRA constituents and for liquid radioactive wastes requiring solidification prior to disposal. Energy*Solutions*' Mixed Waste treatment and solidification capabilities include:

- Chemical Stabilization – Including oxidation, reduction, neutralization and deactivation.
- Amalgamation – For the treatment of elemental mercury.
- Macroencapsulation – For the treatment of radioactive lead solids, RCRA metal-containing batteries and hazardous debris.
- Liquid Solidification – For the solidification of radioactively contaminated liquids such as aqueous solutions, oils, antifreeze, etc. to facilitate land disposal. Mixed waste liquids can also be treated and solidified at the Treatment Facility.
- Vacuum Thermal Desorption (VTD) of Organic Constituents - For the thermal segregation of organic constituents from wastes including wastes with PCBs. Waste containing PCB liquids is also acceptable for VTD treatment. Liquids will require solidification prior to processing through the system. The organic liquid condensate generated in the VTD process must be treated prior to final disposal. The non-liquid waste residue will be further treated for metal contaminates (if required) and disposed at the Mixed Waste embankment.
- Debris Spray Washing – To remove contaminants from applicable hazardous debris.

Each of these treatment technologies are discussed in further detail in Section 3.1.3.

The Treatment Facility includes open and covered waste storage areas for storing, sampling, and staging Mixed Waste shipments, including the following buildings and areas:

- Mixed Waste Operations Building
- Mixed Waste Treatment Building
- Liquids Storage Building
- Mixed Waste storage, staging and sampling areas

2.5 ALARA CRITERIA FOR THE BULK WASTE AND TREATMENT FACILITIES

Energy*Solutions* has implemented an "As Low As Reasonably Achievable" (ALARA) Criteria to minimize worker exposures. The ALARA Criteria is not a license condition but is used as the primary distinction between waste that is acceptable for direct disposal at the BWF and CWF. Wastes with higher dose rates exceeding the ALARA Criteria are disposed at the CWF where waste packages are directly disposed without sampling and actual waste handling. Conversely, wastes with dose rates less than the ALARA Criteria may be disposed at the BWF since the waste is sampled and, in most cases, removed from the shipping container.

As shown in the table below, these ALARA Criteria define allowable external contact dose rates and loose surface contamination limits for waste managed at the BWF.

External Contact Dose Rate	Removable Surface Contamination On Exterior Surfaces of Debris
< 200 mR/hr on manifested container < 500 mR/hr on external, accessible surfaces of waste in container < 80 mR/hr on contact of unshielded container with resin	< 500 dpm α/100 cm^2 < 50,000 dpm β,γ/100 cm^2

External Contact Dose Rate Limits

The external contact dose rate limit of 200 mR/hr applies to the manifested container (e.g., drums/boxes on a flatbed truck or enclosed van, bulk containers such as intermodals, sealands, cargo containers, etc.). For example, if drums or boxes are shipped in a bulk container, such as an intermodal, and the intermodal is manifested as the strong, tight container, then the external contact dose rate of 200 mR/hr applies to the intermodal and not to the drums or boxes inside the intermodal. The drums and boxes in this case would be considered waste and must not contain any item with dose rates exceeding 500 mR/hr on the external, accessible surfaces of the item.

The dose rate for debris items such as pipes should only be measured on the exterior surfaces and on the plane surface of the opening of the pipe to demonstrate compliance with the ALARA Criteria. For example, the internal pipe surfaces may exceed the 500 mR/hr dose limit only if the surface plane to the opening of the pipe is less than 500 mR/hr. Shield plates used to cover the opening of the pipe should not be used solely to lower the dose rates below the criteria since Energy*Solutions* is required to remove or penetrate into the debris items to fill internal voids with grout material.

Another example is DAW placed into 55 gallon drums and compacted into pucks. The dose rate criteria apply to the external surfaces of the puck itself and not to the DAW inside the puck.

Resin External Contact Dose Rate Limits

Unless approved in writing by Energy*Solutions*, resins must be shipped in disposal containers such as drums, boxes, liners, etc. to the BWF for grouting if the container is compliant with the ALARA Criteria . Resins shipped to the BWF must be shipped under a Waste Profile specific for resins unless specifically approved in writing by Energy*Solutions*. Resins with dose rates that exceed these limits must be disposed at the CWF.

Removable Surface Contamination Limits

The same ALARA principles apply to the removable surface contamination limits. The main concern is controlling loose contamination on the exterior surfaces of debris items removed from the container. Fixatives may be applied to the debris items to reduce the removable contamination levels below the specified limits.

Requests for Exceptions

Requested exceptions to the ALARA Criteria are evaluated on a case-by-case basis. For example, Mixed Waste exceeding the ALARA Criteria will be evaluated since the CWF cannot accept Mixed Waste for disposal. Generators must provide radiation and contamination surveys of the container and/or waste item when requesting approval to exceed the ALARA Criteria. Dose rate measurements at one foot from the waste should be provided on the radiation survey. The transportation mode and manifested package information should also be included with the request. The generator must receive written approval for exemptions to the ALARA Criteria prior to shipment of the waste.

SECTION 3

WASTE CRITERIA

3.1 ACCEPTABLE RADIOACTIVE WASTES

The type, form, and quantity of LLRW, NORM, 11e.(2) byproduct material, and mixed waste that Energy*Solutions* can receive for treatment and disposal is governed by the various licenses and permits under which Energy*Solutions* operates. Energy*Solutions* has been issued an Agreement State Radioactive Material License (License #UT 2300249, as amended) by the Utah Division of Waste Management and Radiation Control (DWMRC). This license authorizes Energy*Solutions* to receive Class A LLRW, NORM, and NARM waste. Energy*Solutions* has been issued a separate license (License number UT 2300478, as amended) to receive and dispose of uranium and thorium mill tailings byproduct material as defined by section 11e.(2) of the Atomic Energy Act of 1954, as amended.

The DWMRC issued Energy*Solutions* a State-Issued Part B Permit (EPA ID Number UTD982598898, as amended) to treat and dispose of hazardous waste which is also contaminated with LLRW, NORM, or NARM wastes (mixed waste). Early in 1999, Energy*Solutions* received a Permit modification which authorized the receipt and disposal of PCB Radioactive and PCB Mixed wastes. In 2002, Energy*Solutions* received a TSCA Coordinated Approval from the EPA to expand PCB receipt and disposal options. The TSCA Coordinated Approval has been subsequently expanded to include additional types of PCB radioactive and PCB mixed wastes.

3.1.1 Class A Low-Level Radioactive Waste

Energy*Solutions* Clive facility is authorized to receive Class A Low-Level and Mixed Low-Level Radioactive Waste. These wastes must be classified in accordance with the requirements of the Utah Administrative Code (UAC) R313-15-1009, Classification and Characteristics of Low-Level Radioactive Waste. Utah rule R313-15-1009 is similar to the NRC Waste Classification requirements in 10 CFR 61.55 with the addition of Radium-226. Generators must have in place a quality control program to ensure compliance with the waste classification requirements and prepare and retain with manifest documentation a record documenting the generator's waste classification analysis. Shippers and generators should also review NRC IE Bulletin No. 79-19 to ensure compliance with applicable training requirements in managing LLRW.

The information provided below is a summary of the waste classification regulations and how generators must classify their LLRW prior to shipment to the Clive facility. Further guidance is provided in NRC's "Branch Technical Position on Concentration Averaging and Encapsulation", as amended (BTP). All generators shipping LLRW to the Clive facility must comply with the NRC's BTP as specified in Condition 16 of the Radioactive Material License. **Utilization of the BTP for purposes of waste classification concentration averaging requires written approval from Energy*Solutions* Technical staff. Please contact Energy*Solutions* to assist and support the evaluation of these determinations.**

Determination of waste class involves two considerations. First, consideration must be given to specific long-lived radionuclides listed in Table I of UAC R313-15-1009. Second, consideration must be given to specific short-lived radionuclides listed in Table II of UAC R313-15-1009. The waste is Class A if the radionuclides listed in either Table I or Table II are not present in the waste. Both tables are provided below.

The concentration limits for determining waste class are given in curies per cubic meter with the exception of the following Table I radionuclides which are given in nanocuries per gram: alpha-emitting

transuranic radionuclides with a half-life greater than five years, Pu-241, Cm-242, and Ra-226. The following bullets outline the steps for determining waste class per R313-15-1009.

Classification Tables from UAC R313-15-1009

Table I

Radionuclide	Ci/m^3	nCi/g
C-14	8	
C-14 (act)	80	
Ni-59 (act)	220	
Nb-94 (act)	0.2	
Tc-99	3	
I-129	0.08	
Alpha-emitting transuranics > 5 year half-life		100
Pu-241		3,500
Cm-242		20,000
Ra-226		100

- When the waste does not contain any radionuclides listed in either Table I or II, it is Class A.
- When the concentration does not exceed 0.1 times the value in Table I, the waste is Class A.
- When the concentration exceeds 0.1 times the value in Table I, but does not exceed the value in Table I, the waste is Class C. Energy*Solutions* is not authorized to receive Class B and Class C waste.
- For wastes containing mixtures of radionuclides listed in Table I, the total concentration shall be determined by the sum of fractions rule as illustrated in the example below.
- When the waste does not contain any of the radionuclides listed in Table I, classification shall be determined based on the concentrations shown in Table II.

Table II

Radionuclide	Column 1 Ci/m^3	Column 2 Ci/m^3	Column 3 Ci/m^3
Total of all radionuclides < 5 year half-life	700	*	*
H-3	40	*	*
Co-60	700	*	*
Ni-63	3.5	70	700
Ni-63 (act)	35	700	7,000
Sr-90	0.04	150	7,000
Cs-137	1	44	4,600

* There are no limits established for these radionuclides in Class B or C wastes. Practical considerations such as the effects of external radiation and internal heat generation on transportation, handling, and disposal will limit the concentrations for these wastes. These wastes shall be Class B unless the concentrations of other radionuclides in Table II determine the waste to be Class C independent of these radionuclides.

- When the concentration does not exceed the value in Column 1 of Table II, the waste is Class A.
- When the concentration exceeds the value in Column 1 but does not exceed the value in Column 2 of Table II, the waste is Class B.
- When the concentration exceeds the value in Column 2 but does not exceed the value in Column 3 of Table II, the waste is Class C.
- For wastes containing mixtures of the radionuclides listed in Table II, the total concentration shall be determined by the sum of fractions rule.

For waste material that contains more than one radionuclide, the waste must be classified by applying the sum of fractions rule described in UAC R313-15-1009(1)(g). This rule states:

> "For determining classification for waste that contains a mixture of radionuclides, it is necessary to determine the sum of fractions by dividing each radionuclide's concentration by the appropriate limit and adding the resulting values. The appropriate limits shall all be taken from the same column of the same table. The sum of fractions for the column shall be less than 1.0 if the waste class is to be determined by that column."

The following examples demonstrate the application of the sum of fractions rule in determining waste class.

EXAMPLE #1: A generator has one 55 gallon container of soil contaminated with plutonium-238, radium-226, uranium-234, uranium-235, uranium-238, cesium-137, and strontium-90. The density of the soil is 1.6 g/cm^3 and is used to convert concentration units from pCi/g to Ci/m^3. The radionuclide concentration in the container is as follows:

Radionuclide	Container Concentration (pCi/g)	Container Concentration (Ci/m^3)*	Table I Class A Concentration Limit (pCi/g)	Table II Class A Concentration Limit (Ci/m^3)
Pu-238	3,000	4.8 E-03	10,000	- -
Ra-226	6,000	9.6 E-03	10,000	- -
U-238	5,000	8.0 E-03	- -	- -
U-235	1,100	1.8 E-03	- -	- -
U-234	5,000	8.0 E-03	- -	- -
Sr-90	5,000	8.0 E-03	- -	0.04
Cs-137	8,000	1.3 E-02	- -	1

* The soil density (1.6 g/cm^3) is used to convert from pCi/g to Ci/m^3.

The sum of fractions rule is applied to the container according to the radionuclides listed in Table I and II as follows:

$$\text{Table I:} \quad \frac{3.0E+03}{1.0E+04} + \frac{6.0E+03}{1.0E+04} = 9.0E-01$$

$$\text{Table II:} \quad \frac{8.0E-03}{4.0E-02} + \frac{1.3E-02}{1.0E+00} = 2.1E-01$$

Based on the sum of fractions rule, the waste in this container is determined to be Class A waste (i.e., 90 percent of the Class A limit for Table I radionuclides). This container is acceptable for disposal at Energy*Solutions* since it meets the sum of fractions rule. The uranium radionuclides are not included in the sum of fractions calculation since these radionuclides are not included in Table I or II of R313-15-1009.

EXAMPLE #2: A generator has one 55 gallon container of Dry Active Waste (DAW) contaminated with americium-241, technetium-99, europium-155, colbalt-58, and cesium-135. The density of the DAW is 0.25 g/cm^3 and is used to convert Table II units from pCi/g to Ci/m^3. The radionuclide concentration in the container is as follows:

Radionuclide	Container Concentration (pCi/g)	Container Concentration (Ci/m^3)*	Table I Class A Concentration Limit (pCi/g)	Table II Class A Concentration Limit (Ci/m^3)
Am-241	6,000	1.5 E-03	10,000	- -
Tc-99	900,000	2.3 E-01	0.3 Ci/m^3	- -
Eu-155	150,000	3.8 E-02	- -	700
Co-60	100,000	2.5 E-02	- -	700
Cs-135	500,000	1.3 E-01	- -	- -

* The DAW density (0.25 g/cm^3) is used to convert from pCi/g to Ci/m^3.

The sum of fractions rule is applied to the container according to the radionuclides listed in Table I and II as follows:

$$\text{Table I:} \quad \frac{6.0E+03}{1.0E+04} + \frac{2.3E-01}{3.0E-01} = 1.4E+00$$

$$\text{Table II:} \quad \frac{3.8E-02}{7.0E+02} + \frac{2.5E-02}{7.0E+02} = 9.0E-05$$

Based on the sum of fractions rule, the waste in the DAW container exceeds the Table I Class A concentration limit and would not be acceptable at Energy*Solutions*. Note that Cs-135 is not included in the sum of fractions calculation since this radionuclide is excluded in Table I or II of R313-15-1009.

Waste Classification Labels on Packages

All waste packages containing LLRW, including Mixed LLRW, must be labeled either "Class A Unstable" or "Class AU" and appropriately marked in Block 16 of the Uniform Low-Level Radioactive Waste Manifest Form 541. There are no State or Federal regulations that prescribe the size or color of the classification labels. The Utah DWMRC, however, requires that each package be labeled with a minimum of 0.5-inch lettering in contrasting color (refer to the "Generator Site Access Permit Enforcement Policy - Utah Division of Radiation Control", as amended). This requirement also applies to bulk packaging (e.g., intermodals, gondolas, etc.).

LLRW Compact Export Approval

Energy*Solutions*' Clive disposal site is not classified as a LLRW compact site under the Federal Low-Level Radioactive Waste Policy Act, as amended. Condition 9A of the Radioactive Material License requires generators to demonstrate that the LLRW has been approved for export to Energy*Solutions* prior to the initial shipment of waste. In cases where an initial export authorization comes with an expiration date, generators are responsible to ensure continuing export authorization prior to shipment. Approval is required from the LLRW compact of origin, or for states unaffiliated, the state of origin. All waste shipments received at Clive that require compact export authorization must include a copy of the authorization letter included with the shipping documentation. This license condition only applies to non-DOE generators of LLRW and excludes mixed LLRW. In addition, the Clive facility is not authorized to receive LLRW from the Northwest Compact. Please contact Energy*Solutions* for assistance in complying with this license condition.

3.1.2 NORM/NARM Waste

Energy*Solutions*' Radioactive Material License allows receipt and disposal of Naturally Occurring or Accelerator-Produced Radioactive Material (NORM/NARM) and Technologically Enhanced NORM (TENORM). NORM/NARM does not include Byproduct, Source, or Special Nuclear Material and generally contains radionuclides in the uranium and thorium decay series. Since NORM/NARM waste is not considered LLRW, the waste classification regulations do not apply. In addition, LLRW Compact approval is required for NORM/NARM waste exported from the Rocky Mountain Compact.

3.1.3 Class A Mixed Low-Level Radioactive Waste

Energy*Solutions'* Clive facility is authorized to receive Class A Mixed Low-Level Radioactive Waste (Mixed Waste) for (1) disposal, or (2) treatment and disposal. Mixed Waste is defined by Energy*Solutions*' State-Issued Part B Permit (# UTD982598898) as:

> Waste defined by the Low Level Radioactive Waste Policy Act, Public Law 96-573; this is radioactive waste not classified as high-level radioactive waste, transuranics waste, spent nuclear fuel, or byproduct material as defined by section 11e.(2) of the Atomic Energy Act, and contains hazardous waste that is either listed as a hazardous waste in Subpart D of 40 CFR 261 and/or exhibits any of the hazardous waste characteristics identified in Subpart C of 40 CFR 261, or hazardous waste which also contains naturally occurring radioactive materials.

In accordance with 40 CFR 268.7, and by requirement of the State-issued Part B Permit, a Land Disposal Restriction Notification and/or Certification must accompany each shipment of Mixed Waste. This includes former hazardous wastes that have been treated to remove the Hazardous Waste Codes.

3.1.3.1 Acceptable Hazardous Waste Codes

The specific EPA Hazardous Waste Codes that may be received by Energy*Solutions* are identified in its Statue-Issued Part B Permit. A copy of this permit may be found at the Customer Portal tab on the Energy*Solutions'* web site: www.energysolutions.com . The following Utah Hazardous Waste Codes are not acceptable at Energy*Solutions*: F999 and P999.

3.1.3.2 LDR Compliant Mixed Waste

Mixed Waste must be analyzed to determine if treatment is required prior to disposal. Mixed Waste that is determined to be compliant with the Land Disposal Restriction (LDR) treatment standards specified in 40 CFR 268 may be directly disposed in Energy*Solutions*' Mixed Waste disposal embankment, or under certain circumstances, may be transferred to the LLRW embankment for disposal. Energy*Solutions* is required to verify LDR compliance for all Mixed Waste streams prior to disposal.

3.1.3.3 Mixed Waste Requiring Treatment

Energy*Solutions'* Clive facility may also receive Mixed Waste that requires treatment in order to comply with LDR treatment standards. Energy*Solutions* is approved under the State-Issued Part B Permit to operate a mixed waste treatment facility. Mixed Waste that is not LDR compliant may be treated by Energy*Solutions* using one of the following treatment technologies or methods:

- Chemical Stabilization, Oxidation, Reduction, Neutralization, and Deactivation
- Macroencapsulation of hazardous debris or radioactive lead solids
- Debris Spray Washing
- Thermal Treatment of Organics including PCBs
- Mercury Treatment (Amalgamation)

Chemical Stabilization

Chemical stabilization involves the addition of approved chemical reagents in accordance with a waste-specific treatment formula and is performed in mixers at Energy*Solutions*' Treatment Facility. Formula additions of waste, reagents, and water involve the following chemical processes to chemically bind contaminants to reduce their ability to leach from the waste.

- Stabilization (STABL)
- Deactivation (DEACT)
- Neutralization (NEUTR)
- Oxidation (CHOXD)
- Reduction (CHRED)

Formula development may also be applied to Mixed Waste with very low levels of organic contaminants that require chemical destruction in order to meet total concentration based standards versus a leach standard as determined by the Toxicity Characteristic Leaching Procedure (TCLP) test. Mixed Waste requiring chemical stabilization may be sized and homogenized using various equipment including shredders, vibrating screens, and mixers. In order to evaluate chemical compatibility with the stabilization treatment process, generators shipping waste with Hazardous Waste Codes D001, D002, or D003 must provide a list of specific chemicals in each container with the shipping paperwork.

Macroencapsulation of Hazardous Debris and Radioactive Lead Solids

Mixed Waste consisting of hazardous debris may be macroencapsulated in accordance with the "Alternative Treatment Standards for Hazardous Debris" as specified in 40 CFR 268.45. Figure 3-1 illustrates macroencapsulation of hazardous debris using pozzolanic material. Treatment of hazardous debris via macroencapsulation must meet the following criteria:

> "Macroencapsulation of hazardous debris requires application of surface coating materials such as polymeric organics (e.g., resins and plastics) or use of a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media" (40 CFR 268.45).

In order for hazardous debris to qualify for this alternative treatment, the waste must comply with the debris definition in 40 CFR 268.2(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 Subpart D, Part 268, 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 § 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" (emphasis added).

Figure 3-1. Macroencapsulation of RCRA Hazardous Debris

Therefore, packaged waste subject to macroencapsulation (MACRO) may contain other material that does not meet the debris definition (e.g., paint chips, scale, etc.) to the extent that the mixture is "comprised primarily of debris". Consistent with the ALARA principle, this definition provides generators with flexibility in managing waste streams requiring treatment without having to sort and segregate non-debris items prior to treatment. However, as noted in 40 CFR 268.2(h), "deliberate mixing of other hazardous material with debris to change its treatment classification (i.e., from waste to hazardous debris) is not allowed under the dilution prohibition in § 268.3."

Radioactive Lead Solids (RLS) are another type of hazardous waste that requires treatment via macroencapsulation. Radioactive Lead Solids include, but are not limited to, all forms of lead shielding and other elemental forms of lead. There are no size criteria for RLS unlike the 60 mm particle size requirement for hazardous debris. As such, smaller forms of RLS such as lead shot or fines require macroencapsulation prior to disposal.

Energy*Solutions*' MACRO treatment capability accommodates any size or weight of hazardous debris, thus enabling the generator to reduce the amount of time and cost associated with preparing waste packages for shipment. Generators with large debris over 20,000 pounds requiring macroencapsulation will provide the following information to Energy*Solutions* for review during the waste acceptance process: drawings, photographs, dimensions, weight, description of access ports to internal voids, radiological dose rate and contamination levels, and loading plans.

Debris Spray Washing

Debris Spray Washing is another alternative treatment option utilized by Energy*Solutions* to treat hazardous debris. High pressure water is sprayed at the debris surface to remove hazardous constituents to a "clean debris surface". This treatment technology is best if used on non-porous debris such as metal. ''Clean debris surface'' criteria are specified in 40 CFR 268.45:

> "Clean debris surface means the surface, when viewed without magnification, shall be free of all visible contaminated soil and hazardous waste except that residual staining from soil and waste consisting of light shadows, slight streaks, or minor discolorations, and soil and waste in cracks, crevices, and pits may be present provided that such staining and waste and soil in cracks, crevices, and pits shall be limited to no more than 5% of each square inch of surface area."

Thermal Treatment of Organics (including PCBs)

Mixed Waste streams contaminated with organic hazardous constituents are among the most difficult waste streams to treat. The LDR treatment standards are expressed in terms of total organic concentrations (i.e., mg/kg) versus TCLP concentration based standards. As such, treatment of organic contaminated waste streams requires either destruction or removal of the organic constituent from the waste. Several organic contaminants carry the CMBST (combustion) technology-based treatment standard; the Energy*Solutions*' Vacuum-assisted Thermal Desorption (VTD) unit has been demonstrated and approved by the EPA to meet this standard.

Energy*Solutions* utilizes the VTD system to process organic-contaminated waste streams including those containing PCBs. Waste containing PCB liquids is also acceptable for VTD treatment. PCB capacitors (leaking small PCB capacitors and light ballasts as well as large PCB capacitors) may also be processed through VTD. These wastes require size reduction prior to treatment and Energy*Solutions* has regulatory authority (through the EPA-administered TSCA Coordinated Approval) to shred PCB capacitors prior to treatment.

To meet permit requirements, generators are requested to identify the presence of asphalt or crude oil in profiled VTD waste streams.

Mixed Waste streams are heated in the VTD system at sufficient temperatures to volatize the organic constituents which are then condensed and collected as a liquid. The thermally treated residue is then sampled to verify LDR compliance. In some cases, the treatment residue will require additional treatment to stabilize hazardous metals prior to disposal. The organic liquid condensate will require further treatment to comply with LDR treatment standards.

Mercury Treatment

Elemental mercury contaminated with radioactive materials must be treated via amalgamation per 40 CFR 268.40. Amalgamation of elemental mercury involves the mixing of reagents with the mercury to

produce a non-liquid, semi-solid amalgam that reduces the potential emissions of elemental mercury vapors to the air. The Utah DWMRC also requires the amalgamation treatment to reduce the leachability of elemental mercury to below the characteristic concentration limit of 0.2 mg/L TCLP. This requirement applies to amalgamated mercury treated at either Energy*Solutions*' Treatment Facility or treated at another facility and shipped to Energy*Solutions* for disposal. Generators may ship elemental mercury contaminated with radioactive materials to Energy*Solutions* for treatment and disposal.

Energy*Solutions* is also capable of treating both Low (< 260 ppm Hg) and High Mercury Subcategory waste streams (≥ 260 ppm Hg). Waste streams containing Low Subcategory Mercury must be treated to less than 0.025 mg/L TCLP mercury. The EPA requires High Mercury Subcategory waste streams be treated thermally by incinerating (IMERC) or retorting (RMERC). Energy*Solutions* has received a site-specific treatment variance from the Utah Solid and Hazardous Waste Control Board to treat High Mercury Subcategory waste streams via stabilization instead of IMERC or RMERC. Consequently, waste streams containing High Subcategory Mercury are treated via stabilization and analyzed post-treatment to ensure the TCLP mercury results are less than 0.2 mg/L.

Hazardous debris that is contaminated with mercury may be macroencapsulated in accordance with the "Alternative Treatment Standards for Hazardous Debris" as specified in 40 CFR 268.45. Elemental mercury must be removed from hazardous debris to the maximum extent practical including, but not limited to, draining pumps, hoses, pipes, etc. and wiping excessive mercury from external surfaces.

3.1.4 11e.(2) Byproduct Material

Energy*Solutions* is licensed by the Utah DWMRC to receive and dispose of 11e.(2) byproduct material as defined by the Atomic Energy Act, as amended. 11e.(2) byproduct material is defined as the tailings or waste produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content. Shipments of 11e.(2) waste will be managed and disposed of in a separate disposal embankment specifically licensed and designed for this material.

3.1.4.1 Radionuclide Concentration Limits

Energy*Solutions* may accept 11e.(2) byproduct material with an average concentration in any transport vehicle (truck or railcar) not to exceed 4,000 pCi/g for natural uranium or for any radionuclide in the Radium-226 series, 60,000 pCi/g for Thorium-230, or 6,000 pCi/g for any radionuclide in the thorium decay series. Energy*Solutions*' 11e.(2) Byproduct Material License does not require a sum of fractions calculation. The concentration limits are based on the average concentration of the 11e.(2) byproduct material over the transport vehicle upon receipt and not each individual container on the transport vehicle.

3.1.4.2 Acceptable Forms of 11e.(2) Byproduct Material

In addition to soil and soil-like 11e.(2) byproduct material, Energy*Solutions* may accept 11e.(2) contaminated debris. The generator must certify in the Radioactive Waste Profile Record that the debris was either generated during the cleanup of an 11e.(2) facility or is an integral part of the operations of extraction or concentration of uranium or thorium.

All debris must be less than 10 inches in at least one dimension and no longer than 12 feet in any dimension. Debris that exceeds this size limit (e.g., 11e.(2) oversize debris) is not acceptable for disposal under the 11e.(2) license. Generators with 11e.(2) contaminated debris that are unable to size the debris prior to shipment must contact Energy*Solutions*' Customer Service representative to make necessary arrangements for Energy*Solutions* to size the debris upon receipt.

Shipments of 11e.(2) byproduct material containing free liquid will be considered nonconforming and managed in accordance with Energy*Solutions*' 11e.(2) license.

3.1.4.3 Certification of 11e.(2) Byproduct Material

Energy*Solutions* requires that each generator or owner certify in writing that the waste is 11.e(2) byproduct material as defined by the Atomic Energy Act, as amended. Specifically, the generator or owner must certify that the waste materials are tailings or waste produced by extraction or concentration of uranium or thorium from any ore processed primarily for its source material content. The generator or owner must also certify that the waste material does not contain any other radioactive waste or hazardous waste. The generator or owner must provide the following information as it relates to the 11e.(2) byproduct material:

- License under which the waste was processed
- Licensee that was issued the license
- License issue and/or expiration date
- Issuing agency
- Type of license
- Volume of tailings

The generator or owner must attach to the certification a list of all radiological and non-radiological constituents in the waste and the maximum and average concentrations of such constituents. Energy*Solutions* will perform an independent verification as to the accuracy of the information contained in the certification.

3.1.4.4 Shipping Paperwork for 11e.(2) Byproduct Material

Although 11e.(2) byproduct material is specifically excluded from the definition of Low-Level Radioactive Waste; Energy*Solutions* requires that all shipments be manifested using the Uniform Low-Level Radioactive Waste Manifest (NRC Forms 540 and 541). However, 11e.(2) byproduct material does not have to be classified in accordance with the requirements of URC R313-15-1009. Generators may enter "N/A" in column 16 of the NRC Form 541 for Waste Classification.

3.1.5 Special Nuclear Material

Condition 13 of the Class A LLRW Radioactive Material License incorporates the Special Nuclear Material Exemption issued by the NRC. Under specified conditions, the exemption allows the Clive facility to possess waste containing SNM in greater mass quantities than prescribed in 10 CFR Part 150 without obtaining an NRC license pursuant to 10 CFR Part 70. The conditions are based on concentration limits of SNM in the waste and have been established by the NRC to ensure criticality safety. Special Nuclear Material (SNM) is defined in the UAC R313-12-3 as:

> Plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and other material that the U.S. Nuclear Regulatory Commission, pursuant to the provisions of Section 51 of the Atomic Energy Act of 1954, as amended, determines to be Special Nuclear Material, but does not include source material; or any material artificially enriched by any of the foregoing but does not include source material.

Each generator shipping waste containing SNM (i.e., uranium enriched in U-235, U-233, Pu-236, Pu-238, Pu-239, Pu-240, Pu-241, Pu-242, Pu-243, or Pu-244) must complete and sign Energy*Solutions*' SNM Exemption Certification form as part of the waste profiling process. A copy of this form must also accompany each radioactive waste manifest for waste streams that contain any of the above isotopes. The

SNM Exemption Certification form lists specific requirements that must be met in order for the Clive facility to receive and accept waste containing any amount of SNM. The information on this form may also be completed using the Energy*Solutions* online Customer Portal at www.energysolutions.com.

The NRC developed the SNM Exemption conditions based on criticality studies and independent calculations. A variety of scenarios were analyzed to determine limiting criticality conditions for waste materials containing SNM. The NRC determined that several conditions in addition to concentration limits would be required to assure criticality safety. A discussion of their approach is documented in the *Safety Evaluation Report Regarding the Proposed Exemption from Requirements of 10 CFR Part 70* (SER) (Docket 40-8989). Specific guidance from the SER is included in this section.

The following information provides general guidance on completing the SNM Exemption Certification form. These guidelines are grouped into four sections similar to the sections on the form.

3.1.5.1 Condition 1 - Percent Enrichment of Uranium-235

The first section contains a table that lists U-235 concentration limits and related measurement uncertainty values for four different scenarios. These scenarios allow for different enrichments, waste configurations and commingling with moderating material in different percentages. The measured concentrations and associated uncertainties of U-235 in individual waste containers at time of receipt must not exceed the values listed in the RML, Condition 13. Generators with low SNM concentrations relative to the specified limits may select the most restrictive scenario which allows more flexibility in demonstrating compliance with other conditions in the SNM Exemption. Check "Not Applicable" if the waste does not contain enriched U-235. Other SNM isotopes including U-233, Pu-236, and Pu-238 through Pu-244 and their associated limits are also listed.

The measurement uncertainty values listed in the last column of the table represent a maximum allowable concentration limit rather than a percentage value. The NRC provides the following guidance in the SER:

> Staff considers that a reasonable measurement uncertainty value (one-sigma) would be in the range of 15 percent. Staff used 30 percent (two-sigma) in calculating the operational limit to increase the confidence level that the concentration of the waste based on a measurement would not exceed the subcritical value. Other radiochemistry techniques may be used to quantify the concentration of these radionuclides. These techniques typically have lower measurement uncertainty levels, but introduce sampling uncertainty. The measurement uncertainty levels are included in condition 1 and represent 15 percent of the maximum concentration value. A concentration value was used for the measurement uncertainty rather than a percentage value to allow greater flexibility for generators with waste having very low SNM concentrations.

3.1.5.2 Condition 2 – Specified Limits for Waste Containing SNM

Each generator must certify to all five conditions listed in this section and provide justification based on process knowledge, physical observations, and/or testing. These conditions are categorized as follows:

- SNM Isotope Concentration Limits
- Spatial Distribution Requirements
- Bulk Chemical Limits
- Unusual Moderator Limits
- Soluble Uranium Limits

These conditions require the generator to adequately characterize the waste in terms of the range and variability of SNM concentrations in the waste.

SNM Isotope Concentration Limits

Condition 2.a requires the generator to certify that concentrations of SNM in individual waste containers do not exceed the applicable U-235 concentration limit and the concentration limits for all isotopes listed in Table 1 of the SNM Exemption Certification form. Generators must certify that measurement uncertainty values from radiological testing are less than the maximum allowable concentration values listed in Table 1. As previously stated, a concentration value was used for the measurement uncertainty rather than a percentage value to allow greater flexibility for generators with waste having very low SNM concentrations.

Spatial Distribution Requirements

Condition 2.b requires the generator to certify that the SNM is homogeneously distributed throughout the waste or that the SNM concentrations in any contiguous mass of 600 kilograms (1,323 lbs) do not exceed on average the specified limits. This certification may be based on process knowledge or testing of the waste. The SER provides the following guidance on verifying spatial distribution of SNM:

> Knowledge of the process by which the waste was generated or laid down may assure that the concentration varies smoothly throughout the volume with a maximum in a known location. It is then only necessary to measure the concentration at this maximum plus other measurements confirming smooth variation. In other cases where a smooth variation in SNM concentration in the waste is not present, additional measurements and characterization will be needed.

If spatial distribution of SNM in the waste is not known through process knowledge, generators may be able to certify to this requirement by using the following example.

> EXAMPLE: A generator's waste stream contains less than 10 percent enriched U-235. Based on the limits in Condition 1, the corresponding U-235 concentration limit is 1,900 pCi/g. The mass of U-235 at a concentration of 1,900 pCi/g in 600 kg of waste can be calculated using the specific activity for U-235 ($2.16X10^6$ pCi/g) as follows:
>
> $$\frac{1{,}900\frac{\text{pCi}}{\text{g}} \times 600{,}000\text{g}}{2.16\text{X}10^6\ \frac{\text{pCi}}{\text{g}}} = 527.8\ \text{g U235}$$
>
> If the total mass of U-235 per container does not exceed the mass of U-235 in 600 kg of waste at 1,900 pCi/g, then compliance with the spatial distribution requirement can be achieved. Therefore, for this example, the mass of U-235 in the waste containers must not exceed 527.8 grams. Compliance with DOT regulations must also be met for shipments containing SNM.

Radioactive liquid waste containing SNM may also be accepted for solidification prior to disposal provided the SNM concentration does not exceed the SNM concentration limits specified in Condition 1. For containers of liquid waste with more than 600 kg of waste, the total activity (pCi) in the manifested container must not exceed the SNM concentration in Condition 1 times 600 kg of

waste. For example, the maximum activity of Pu-239 in any manifested container of liquid waste is 6.0 mCi as shown below:

$$10{,}000\frac{\text{pCi}}{\text{g}} \times 600{,}000\text{ g} = 6.0\text{x}10^{9}\text{ pCi} = 6.0\text{ mCi Pu-239}$$

The maximum activity of SNM in the liquid waste is limited by the volume of liquid shipped in a container and the concentration of SNM in the waste. Consequently, to comply with this condition, the Pu-239 concentration allowed in the liquid waste decreases as the size of the shipping container increases.

Bulk Chemical Requirements

Condition 2.c excludes wastes containing "pure forms" of chemicals containing carbon, fluorine, magnesium, or bismuth in bulk quantities except as allowed by the conditions in Section 1 (e.g., a pallet of drums, a B-25 box). By "pure forms," it is meant that mixtures of the above elements such as magnesium oxide, magnesium carbonate, magnesium fluoride, bismuth oxide, etc. do not contain other elements. Demonstration of compliance with this condition may be based on process knowledge or testing.

The exclusion of bulk quantities of these chemicals in waste containing SNM is based on the criticality studies conducted by Oak Ridge National Laboratories (ORNL) for the NRC. The ORNL studies used silicon dioxide (SiO_2) to represent the waste matrix in performing criticality calculations. Additional studies were performed replacing the silicon in the SiO_2 matrix with other common elements and determined that the above chemicals produced more reactive systems. Therefore, the NRC implemented this condition to restrict waste forms that contain pure forms of these chemicals.

Unusual Moderator Limits

Condition 2.d limits the total quantities of beryllium, hydrogenous material enriched in deuterium, or graphite to one percent or less of the total weight of the waste (except as allowed by the conditions in Section 1). Information supporting this requirement may be based on process knowledge, physical observations, or testing. The following explanation from the SER provides the basis for this limit:

> Unusually effective neutron moderating materials, such as beryllium, graphite, or heavy water, could provide a more reactive matrix. Previous evaluations have shown that the presence of large amounts of beryllium can permit criticality to occur at lower concentrations of SNM in soil. Therefore, limiting unusual moderators is required to assure the effectiveness of the SNM concentration limits in maintaining criticality safety. Because prohibiting unusual moderators could result in problems demonstrating compliance, staff decided to set a finite maximum limit on unusual moderators.

Soluble Uranium Limits

Condition 2.e limits highly soluble forms of uranium in waste packages to 350 grams of uranium-235 or 200 grams of uranium-233. If the waste contains mixtures of U-233 and U-235, the waste must meet the sum of the fractions rule on a container basis. Highly soluble forms of uranium include, but are not limited to: uranium sulfate, uranyl acetate, uranyl chloride, uranyl formate, uranyl fluoride, uranyl nitrate, uranyl potassium carbonate, and uranyl sulfate. Compliance with this condition may be based on process knowledge or testing.

This condition is based on an evaluation performed by the NRC to determine mechanisms that could increase the concentration of SNM in the waste. The SER identifies one such mechanism which involves the potential for highly soluble uranium to be readily leached with water and concentrate in the waste. Generators must evaluate each waste stream to determine the chemical composition of uranium in the waste and to ensure that the presence of highly soluble forms of uranium do not exceed the mass limits specified above.

3.1.5.3 Condition 3 – Characterization of Waste Containing SNM

The NRC developed specific pre-shipment requirements that have been implemented into the waste profiling process. Energy*Solutions* reviews this information to determine if the pre-shipment waste characterization and assurance plan is complete and that the supporting information is sufficient to demonstrate compliance with all SNM Exemption requirements. This section describes the information that must be attached to the Waste Profile and includes the following items:

- Waste Description
- Waste Characterization Summary
- Uniformity Description
- Manifest Concentration

Condition 3.a requires the generator to describe how the waste was generated, the physical form of the waste, and the uranium chemical composition. The uranium chemical composition of the waste is required to support condition 2.e which limits highly soluble forms of uranium. If compliance with this requirement cannot be demonstrated by process knowledge, approved laboratory methods are available to determine the uranium leaching characteristics of the waste.

Condition 3.b requires the generator to describe how the waste was characterized, the range of SNM concentrations, and the analytical results with error values used to develop the concentration ranges. This information is required to support Conditions 1, 2.a, and 2.b. Generators must sufficiently sample and characterize the waste to ensure that the SNM concentrations do not exceed the specified limits and that the SNM is homogeneously distributed throughout the waste.

A description of the spatial distribution of SNM in the waste is required by Condition 3.c. This description supports the certification of Condition 2.b. The NRC provides guidance in the SER to assist generators in demonstrating compliance with this requirement. Section 3.3.3.2 contains the related NRC guidance.

Condition 3.d requires a description of the methods that will be used to determine the SNM concentrations on the manifests. If concentrations of SNM are significantly lower than the specified limits or the SNM is uniformly distributed throughout the waste, generators are not necessarily required to perform direct measurements on every container. Appropriate methods such as scaling factors may be used in these instances. As SNM concentrations approach the limits, however, generators must perform more extensive characterization to determine the range and variability of SNM in the waste. The following NRC guidance is provided in the SER:

> Where the concentration is a small fraction of the concentration limit and characterization results indicate relatively small variation in that concentration, using scaling factors would be an appropriate method to determine SNM concentrations in individual waste containers. However, where the concentration of SNM approaches the concentration limit or the characterization results indicate large variations in SNM containers, using direct measurements on each package would be an appropriate method to determine SNM concentrations in individual waste containers.

Waste packages that contain elevated concentrations of SNM must be characterized by direct measurements which should involve sampling and/or radiological testing procedures for individual packages.

3.1.5.4 Condition 4 – Generator's Certification

The generator's certification of compliance is required in the final section. Each generator must certify that the information provided on the SNM Exemption Certification form is complete, true, and accurate. The form and all supporting information must be attached to the Waste Profile upon submission to Energy*Solutions*. In addition, the SNM Exemption Certification form must be included with each waste manifest. The information supporting the form, however, should not be included with the manifest. The information on this form may also be completed using the Energy*Solutions* online Customer Portal at www.energysolutions.com.

3.1.6 Uranium Waste Shipments

3.1.6.1 Depleted Uranium

On April 13, 2010 the State of Utah Radiation Control Board voted to impose a moratorium on the disposal of concentrated (defined as >5%) depleted uranium (DU) at Energy*Solutions*' Clive, Facility. Waste containing depleted uranium cannot be manifested greater than 18,000 pCi/g. Generators are encouraged to manifest depleted uranium as "U-Dep", natural uranium as "U-Nat" and only enriched uranium shipments isotopically. Compliance with moratorium limits will be evaluated on a manifested container basis. The moratorium does not apply to waste manifested as natural uranium (U-Nat) or Special Nuclear Material with U-235 exceeding 0.711 weight percent.

This moratorium is effective for any waste received after May 26, 2010 and will remain in effect until the Utah DWMRC approves a DU-specific Performance Assessment. Generators with existing waste profile depleted uranium concentrations exceeding the moratorium limits will be contacted and requested to reduce the allowable DU concentrations to be compliant with activities specified above.

3.1.7 Radium-226 Waste

Energy*Solutions*' Radioactive Material License authorizes the receipt and disposal of waste containing radium-226 (Ra-226) in concentrations not to exceed 10 nCi/gram In order to minimize potential generation of radon-222 gas and subsequent contamination of personnel, areas, and equipment by the radon particulate decay products; shipments containing radium-226 are subject to the following limitations:

- Any shipment containing Ra-226 in concentrations ≥1,000 pCi/g requires written approval by Energy*Solutions'* Technical staff, and,
- Any shipment containing Ra-226 in soil, soil-like material, or easily dispersible material such as fine rubble or floor sweepings in concentrations ≥1,000 pCi/g must be packaged in non-bulk containers (i.e. drums or boxes) unless written approval is obtained from Energy*Solutions'* Technical staff.

3.1.8 Bulk Shipments of Alpha Emitting Radionuclide Waste

Waste containing alpha emitting radionuclides received in bulk containers presents a potential hazard during disposition. Bulk containers may include intermodals, gondola rail cars, or soft-sided bags. Energy*Solutions* requests that generators provide written notification, either on the 5-Working Day

Shipment Notification, Customer Portal schedule request information, or specific email to a Technical Services representative, when waste containing alpha emitting radionuclides shipped in bulk containers is scheduled for disposition at Clive.

3.1.9 Waste Containing Hot Particles

Hot particles are very small – often microscopic discreet radioactive fragments with high specific activity. Some hot particles are capable of delivering a high beta dose rate (>1 rem/hr and higher) to a localized area. They generally consist of radioactive fission and activation products and are insoluble in water. Their size ranges from less than one millimeter down to 10 nanometers or less. Due to their radioactivity, they are usually highly charged. This charge results in their affinity for clinging to skin, hair, and clothing and their ability to jump large gaps between objects. Because of this ability to jump wide distances, they are often referred to as "fleas". Because of their small size, high specific activity, electrical charge, and very migrant unpredictable nature they are very difficult to control when released into the work area of environment.

Hot particle waste is defined as waste containing or potentially containing hot particles as defined in this document. Additionally, EnergySolutions considers any waste material marked as Hot Particle (e.g. pre-printed bags/labels or hand-written information on waste items) to be Hot Particle Waste. Because of potential radiological safety concerns associated with this type of waste, Energy*Solutions* requests that generators submit hot particle-dedicated profiles for each waste stream that includes hot particles. Contact your Technical Services representative for specific guidance.

3.1.10. Polychlorinated Biphenyl (PCB) Radioactive Waste

Energy*Solutions* is authorized to receive and dispose of most types of PCB/radioactive and PCB/mixed wastes defined by the EPA in 40 CFR 761. The EPA issued Energy*Solutions* a TSCA Coordinated Approval for receipt and disposal of drained PCB Articles and PCB Containers that contained PCBs at concentrations equal to or greater than 500 ppm. Wastes received under the TSCA Coordinated Approval must be disposed in the Mixed Waste disposal embankment. All PCB waste shipped to the Mixed Waste disposal facility must be accompanied with a Uniform Hazardous Waste Manifest. As required by 40 CFR 761, the Uniform Hazardous Waste Manifest must include the date the PCB waste was removed from service. Articles and containers of PCB waste must also be dated with the removed from service date per 40 CFR 761.65(c)(8). Empty PCB containers that contained PCBs at concentrations less than 500 ppm may be disposed in the Class A LLRW Facility; however, this waste will require a Uniform Hazardous Waste Manifest and include the removed from service date on each outer container. A Uniform Hazardous Waste Manifest is not required for any other PCB wastes disposed at the Class A LLRW Facility.

The following sections describe the types of PCB waste categories acceptable for disposal at the Class A LLRW or Mixed Waste disposal embankments. Asterisks indicate PCB waste categories that require disposal in Energy*Solutions*' Mixed Waste disposal embankment. Please note that 40 CFR 761.1(b)(2) requires that PCB concentrations be determined on a weight-per-weight basis (e.g., mg/kg), or for liquids, on a weight-per-volume basis (mg/L).

Energy*Solutions*' Ground Water Quality Discharge Permit (GWQDP) and State-Issued Part B Permit prohibit the receipt of any PCB liquids except for 1) intact, non-leaking PCB Small Capacitors or 2) PCB waste that will be treated via VTD. Shipments of PCB wastes containing unauthorized free liquids will not be accepted by Energy*Solutions* unless re-profiled to a VTD waste stream. Generators shipping PCB wastes in re-usable containers must be lined to prevent PCB contamination on the internal surfaces of the container. Containers contaminated with PCBs will be returned to the shipper as a PCB Container.

3.1.10.1 PCB Remediation Waste

PCB Remediation waste is waste containing PCBs as a result of a spill, release, or other unauthorized disposal, at the following concentrations: (1) Materials disposed of prior to April 18, 1978, that are currently at concentrations ≥ 50 ppm PCBs, regardless of the concentration of the original spill; (2) materials which are currently at any volume or concentration where the original source was ≥ 500 ppm PCBs beginning on April 18, 1978, or ≥ 50 ppm PCBs beginning on July 2, 1979; and (3) materials which are currently at any concentration if the PCBs are spilled or released from a source not authorized for use under this part. PCB remediation waste means soil, rags, and other debris generated as a result of any PCB spill cleanup, including, but limited to soil, gravel, dredged materials, such as sediments, settled sediment fines, and aqueous decantate from sediment, sewage sludge containing < 50 ppm PCBs, buildings and other man-made structures (such as concrete floors, wood floors, or walls) porous surfaces, and non-porous surfaces. Unless sampled and analyzed in accordance with 40 CFR 761.283, .286, or .292, the PCB waste shall be assumed to contain ≥ 50 ppm PCBs (40 CFR 761.61(a)(5)(i)(B)(2)(i)).

PCB Remediation Waste Category	**Definition**	**Acceptable**
Non-liquid Cleaning Materials and PPE	Includes non-porous surfaces and other non-liquid materials such as rags, gloves, booties, other disposable PPE, and similar materials resulting from PCB cleanup activities.	Yes
< 50 ppm or < 100 μg/100 cm^2	PCB Remediation waste containing < 50 ppm or < 100 μg/100 cm^2.	
≥ 50 ppm or ≥ 100 μg/100 cm^2	PCB Remediation waste containing ≥ 50 ppm or ≥ 100 μg/100 cm^2.	Yes*

* Requires disposal in Energy*Solutions*' Mixed Waste disposal embankment.

3.1.10.2. PCB Bulk Product Waste

PCB Bulk Product waste is waste derived from manufactured products containing PCBs in a non-liquid state, at any concentration where the concentration at the time of designation for disposal was ≥ 50 ppm PCBs. PCB Bulk Product waste includes bulk wastes or debris from the demolition of buildings and other man-made structures manufactured, coated, or serviced with PCBs.

PCB Bulk Product Waste Category	**Definition**	**Acceptable**
Presumed or known to leach < 10 µg/L PCBs	Plastics (such as plastic insulation from wire or cable; radio, television and computer casings; vehicle parts; or furniture laminates); preformed or molded rubber parts and components; applied dried paints, varnishes, waxes or other similar coatings or sealants; caulking; Galbestos; non-liquid building demolition debris; or non-liquid PCB bulk product waste from the shredding of automobiles or household appliances from which PCB small capacitors have been removed (shredder fluff). Other PCB Bulk Product waste that leaches PCBs at < 10 ug/L of water measured using a procedure used to simulate leachate generation.	Yes
Presumed or known to leach ≥ 10 µg/L PCBs	Paper or felt gaskets, fluorescent light ballasts with PCBs in the potting material ≥ 50 ppm	Yes*

* Requires disposal in Energy*Solutions*' Mixed Waste disposal embankment.

3.1.10.3 PCB Articles

A PCB Article is any manufactured article, other than a PCB Container, that contains PCBs and whose surfaces have been in direct contact with PCBs. A "PCB Article" includes capacitors, transformers, electric motors, pumps, pipes and any other manufactured item (1) which is formed to a specific shape or design during manufacture, (2) which has end use functions dependent in whole or in part upon its shape or design during end use, and (3) which has either no change of chemical composition during its end use or only those changes of composition which have no commercial purpose separate from that of the PCB Article.

Energy*Solutions* PCB management is regulated under a TSCA Coordinated Approval (CA) from the EPA. Under the CA, Energy*Solutions* can receive both drained PCB articles (certified flushed), as well as articles that require draining and flushing (PCB transformers or hydraulic machines). PCB Articles that have been drained must be filled with sufficient absorbent material to absorb <u>all</u> remaining liquid. Energy*Solutions* can also receive and process small leaking PCB capacitors through VTD. Large PCB capacitors require size reduction and VTD processing prior to disposal; Energy*Solutions* has permits in place that allow both of these activities.

The following table lists the various types of PCB Articles and whether the material is acceptable for disposal in either the mixed waste disposal embankment or LLRW disposal embankment.

PCB Articles Category	Definition	Acceptable
PCB Transformers	Any transformer that contains ≥ 500 ppm PCBs.	Yes*[1]
PCB Capacitors (Intact and non-leaking)	Any capacitor that contains ≥ 500 ppm PCBs. Capacitor is a device for accumulating and holding a charge of electricity and consisting of conducting surfaces separated by a dielectric. Assume PCBs ≥ 500 ppm in a capacitor of unknown concentration made prior to July 2, 1979. Assume PCBs < 50 ppm in a capacitor made after July 2, 1979.	--
PCB Small Capacitors	A capacitor which contains less than 3 lbs of dielectric fluid. A capacitor whose total volume is less than 100 cubic inches may be considered to contain less than 3 lbs of dielectric fluid. Includes fluorescent light ballasts containing intact and non-leaking PCB small capacitors and PCB potting material (< 50 ppm).	Yes*
PCB Large High or Low Voltage Capacitors	A large high voltage capacitor contains 3 lbs or more of dielectric fluid and which operates at or above 2,000 volts. A large low voltage capacitor contains 3 lbs or more of dielectric fluid and which operates below 2,000 volts.	Yes*[3]
PCB Hydraulic Machines	Includes die casting machines	Yes*[2]
PCB-Contaminated Electrical Equipment	Any electrical equipment (such as transformers, capacitors, and circuit breakers, including those in railroad locomotives and self-propelled cars) which contain ≥ 50 ppm and < 500 ppm PCBs in the dielectric fluid. In the case of dry electrical equipment, the electrical equipment is PCB-Contaminated if it has PCBs > 10 ug/100 cm^2 and < 100 ug/100 cm^2 as measured by a standard swipe test (40 CFR 761.123).	Yes
Other PCB Articles		--
PCB Article (≥ 500 ppm PCBs)		Yes*
PCB-Contaminated Article	Any article which contains ≥ 50 ppm and < 500 ppm PCBs in the dielectric fluid. In the case of dry electrical equipment, the electrical equipment is PCB-Contaminated if it has PCBs > 10 ug/100 cm^2 and < 100 ug/100 cm^2 as measured by a standard swipe test per 40 CFR 761.123.	Yes

* Requires disposal in Energy*Solutions*' Mixed Waste disposal embankment.
[1] Requires solvent flushing (by generator or Energy*Solutions*).
[2] Requires solvent flushing if PCB concentrations ≥ 1,000 ppm.
[3] Requires VTD treatment.

3.1.10.4 PCB Containers

A PCB Container is any package, can, bottle, bag, barrel, drum, tank, or other device that contains PCBs or PCB Articles and whose surfaces have been in direct contact with PCBs. PCB Containers must be emptied to the extent practical and not contain any free standing liquid. All PCB Containers received for disposal require a Uniform Hazardous Waste Manifest and removed from service dates.

PCB Container Category	Definition	Acceptable
≥ 500 ppm PCBs	The PCB concentration of material which was contained in the PCB Containers was ≥ 500 ppm	Yes*
< 500 ppm PCBs	The PCB concentration of material which was contained in the PCB containers was < 500 ppm	Yes

* Requires disposal in Energy*Solutions*' Mixed Waste disposal embankment.

3.1.10.5 PCB Oils

Energy*Solutions* is authorized to process PCB oils through the VTD unit. Oils may originate from drained (either by the generator or Energy*Solutions*) large capacitors, transformers, or other PCB articles.

3.1.11 Dioxins and Furans

Dioxins/furans are generated by a variety of chemical and thermal industrial processes. Carrying EPA waste codes F020, F021, F022, F023, F026 and F027, dioxins and furans represent some of the most toxic compounds found in waste. Energy*Solutions* is authorized to receive LDR compliant dioxin/furan waste for direct disposal in the mixed waste embankment. Dioxin/furan waste requiring treatment will be evaluated on a case by case basis before acceptance is approved. Like PCB wastes, dioxin/furan waste streams must have dedicated radioactive waste profile records.

3.1.12 UCNI and Export Controlled Waste

Energy*Solutions* has been granted approval from the DOE to receive Unclassified Controlled Nuclear Information (UCNI) and Export Controlled radioactive waste. This type of waste primarily originates from the DOE gaseous diffusion enrichment facilities. DOE generators must contact Energy*Solutions* prior to shipping UCNI and Export Controlled radioactive waste.

3.1.13 Chelating Agents

Energy*Solutions* is authorized to dispose of waste containing up to 22 percent by weight chelating agents in the Mixed Waste disposal embankment. Waste disposed of in the LLRW disposal embankment must contain less than 0.1 percent by weight chelating agents. Generators may ship waste containing greater than 22 percent chelating agents to Energy*Solutions*' Treatment Facility once approved during the waste profiling process. Energy*Solutions* will treat waste containing greater than 22 percent chelating agents prior to disposal in order to comply with this requirement.

3.1.14 Asbestos and Beryllium

Energy*Solutions* is authorized to dispose of waste containing both friable and non-friable asbestos. The asbestos waste must be described in the Radioactive Waste Profile Record and packaged, marked, and labeled in accordance with applicable federal regulations. Friable asbestos must not be packaged in bulk containers unless approved in writing by Energy*Solutions*. The online Customer Portal requests specific information for waste containing asbestos.

Asbestos waste that requires wetting to prevent dispersion must be inspected to minimize free liquids. However, unless the waste is to be solidified at the Treatment Facility, the free liquid may not exceed one percent of the waste volume. Absorbent material must be added to containers when free liquids are present. Waste streams containing greater than one percent free liquid by waste volume may be shipped to Energy*Solutions*' Treatment Facility for solidification prior to disposal. Contact Energy*Solutions* prior to shipping waste streams that contain free liquids.

Waste containing other potential inhalation hazards such as beryllium must be described in the Waste Profile and documented on the 5 Working-Day Shipment Notification form (or in the scheduling section of the online Customer Portal). A quantitative description of potential beryllium surface contamination and air monitoring measurements both before and after any fixatives or wrapping are applied should be included in the Waste Profile for beryllium contaminated waste. The description should also include information about the current management of the beryllium contaminated waste including specific work control procedures in handling and packaging the waste for shipment, details of the beryllium protection program as applicable, and air monitoring measurements, etc. Beryllium contaminated waste must be packaged in 55-gallon or smaller drums unless approved in writing by Energy*Solutions*.

3.1.15 Lab Packs

Lab packs are described as small containers of liquid with varying hazardous waste codes that are placed in a larger shipping or storage container. Energy*Solutions* is authorized to receive lab packs in which all of the contents are known and acceptable for treatment or disposal. Lab packs require a specific Waste Profile that must be approved by Energy*Solutions* prior to shipment. Generators must provide a description of unused chemicals within containers with the shipping paperwork.

3.1.16 Reactive Metal Waste

Energy*Solutions* will review the acceptance of reactive metals for treatment on a case-by-case basis. Acceptance requires State of Utah DWMRC approval.

3.1.17 Battery Management

Energy*Solutions* is able to receive several different types of batteries. The disposition path is dependent upon the chemical composition of the battery. Common battery types are listed below along with a short description of Energy*Solutions'* management approach. Please contact Technical Services with any questions.

1. **Alkaline Batteries:** Alkaline batteries are not considered a RCRA- regulated hazardous waste. The electrolyte of an alkaline battery does not meet the definition of an aqueous solution or free liquid; therefore, they are not, by definition, a corrosive waste. Disposition is direct disposal.

2. **Carbon-Zinc Batteries:** Carbon-zinc batteries are not considered a RCRA- regulated hazardous waste. Disposition is direct disposal.

3. **Lead-Acid Batteries:** Lead-acid batteries destined for disposal are considered a RCRA-regulated hazardous waste due to their lead content (EPA Hazardous Waste Code D008). If the battery is not drained, it will typically also carry a D002 corrosive waste code. Energy*Solutions* will drain and neutralize the electrolyte, and macroencapsulate the battery carcass.

4. **Lithium Batteries:**:Lithium batteries are subdivided into the following categories:
   - Lithium-manganese dioxide batteries are non-hazardous solid wastes. Disposition is direct disposal.
   - Lithium-sulfur dioxide batteries (single-cell) are non-hazardous solid wastes. Disposition is direct disposal.
   - Lithium-sulfur dioxide batteries (multi-cell) may be non-hazardous solid waste or characteristic hazardous wastes. If equipped with a Complete Discharge Device (CDD), the batteries are considered a non-hazardous solid waste after discharging. If the batteries are not equipped with a CDD, multi-cell lithium-sulfur dioxide batteries are characteristic hazardous waste due to ignitability (D001) and reactivity (D003). Disposition is direct disposal for non-RCRA regulated, and macroencapsulation for RCRA regulated.
   - Lithium-thionyl chloride batteries are characteristic hazardous wastes. These batteries are a characteristic hazardous waste due to the toxicity (chromium D007), ignitability (D001) and reactivity (D003). Disposition is macroencapsulation.

5. **Magnesium Batteries:** Magnesium batteries with 50 percent or greater remaining charge are considered a RCRA- regulated hazardous waste due to the characteristic of toxicity (chromium D007). Batteries with less remaining charge are not considered RCRA- regulated waste. Batteries with greater than 50 percent charge will be macroencapsulated; batteries with less than 50 percent charge will be direct disposed.

6. **Mercury Batteries:** Mercury batteries are considered a RCRA- regulated hazardous waste due to the characteristic of toxicity (mercury D009). Disposition is macroencapsulation.

7. **Ni-Cad Batteries:** Ni-cad batteries are considered a RCRA- regulated hazardous waste due to the characteristic of toxicity (cadmium D006). Disposition is macroencapsulation.

8. **Silver Batteries:** Silver batteries are considered a RCRA- regulated hazardous waste due to the characteristic of toxicity (silver D011 and mercury D009). Disposition is macroencapsulation.

9. **Thermal Batteries:** Thermal batteries are considered a RCRA- regulated hazardous waste due to the characteristic of toxicity (chromium D007). Disposition is macroencapsulation.

3.2 ACCEPTABLE FORMS OF RADIOACTIVE WASTE

Energy*Solutions*' Radioactive Material License authorizes the receipt of radioactive waste in the form of liquids and solids. Solid radioactive waste must contain less than one percent free liquid by waste volume. Generators shipping solid waste must minimize free liquid to the maximum extent practicable.

Conversely, liquid radioactive wastes contain greater than one percent free liquid by waste volume (e.g., sludge, wastewater, evaporator bottoms, etc.). Energy*Solutions* will determine if a waste contains free liquids by either visual inspection or by performing the Paint Filter Liquid Test (EPA SW-846 Method 9095). Liquid radioactive waste is solidified at Energy*Solutions*' Treatment Facility prior to disposal.

Solid waste includes, but is not limited to, the following forms of waste: soil, sludge, dry active waste, metal, concrete, wood, glass, resin, etc. For simplicity, these waste forms are categorized into either soil or debris waste streams due to the placement criteria specified in the license.

3.2.1 Soil or Soil-Like Wastes

Energy*Solutions* constructs the disposal embankment by achieving specified compaction criteria and minimizing void spaces in the disposal lift. Construction of the disposal embankment in this manner ensures long-term integrity of the disposal facility. Soil and soil-like waste material are placed in the disposal embankment and compacted in lifts. The license requires these soil lifts to be compacted to greater than 90 percent of optimum density and at a moisture content not to exceed three percentage points above optimum moisture as determined by the Standard Proctor Method (ASTM D-698). Consequently, soil or soil-like waste must have soil-like properties and conform to the following specifications. Otherwise, the waste material will be considered debris and managed for disposal as described in Section 3.2.2.

<u>Soil/Soil-Like Properties</u>

- Greater than 70 percent by weight compactable material less than 3/4" particle size and 100 percent compactable material less than 4" particle size
- Maximum dry density greater than 70 pounds per cubic foot (dry weight basis)
- Moisture content of the soil or soil-like waste must not exceed three percentage points above optimum moisture upon receipt at Energy*Solutions*
- Maximum dry density and optimum moisture must be determined by Standard Proctor Method ASTM D-698

Energy*Solutions* may request a preshipment sample to perform an independent compaction test using Standard Proctor Method ASTM D-698. Generators must include their compaction test results as part of the waste profile submittal.

Shipments of soil or soil-like waste streams may contain some standard size debris in waste packages. For disposal in a bulk soil lift, debris must be less than 10 inches in a least one dimension and no longer than 12 feet in any dimension. Debris items that exceed this size limit should be profiled and packaged separately, unless prior written approval is granted by Energy*Solutions*. The percentage of allowable debris in the waste stream must be listed in the waste profile. Soil or soil-like waste streams with moisture content exceeding three percentage points above optimum moisture are acceptable by Energy*Solutions* and require additional handling prior to disposal. Contact Energy*Solutions*' Technical Services staff prior to shipping soil or soil-like waste streams with elevated moisture content. Generators should be aware that absorbed liquids typically do not exhibit soil-like properties.

Generators are requested to identify Department of Agriculture (DOA) regulated soils in the waste profile. Of particular concern are DOA regulated soils with the potential for witch weed, fire ants, golden nematodes, and corn cyst nematodes.

3.2.2 Debris

Waste material not meeting the specified soil or soil-like properties is considered debris by Energy*Solutions*. Debris includes both decommissioning and routinely generated operational waste including, but not limited to, radiologically contaminated paper, piping, rocks, glass, metal, concrete, wood, bricks, resins, sludge, tailings, slag, residues, and personal protective equipment (PPE) that conforms to the debris size requirements.

3.2.2.1 Standard Size Debris

Debris is defined into two broad categories based on size. The first category is standard debris and includes materials that are less than 10 inches in at least one dimension and no longer than 12 feet in any dimension. Debris that does not meet this size criterion is categorized as oversize debris.

Standard size debris is uniformly distributed throughout the engineered soil lifts. Energy*Solutions* adds either native clay or radioactive soil to the debris. Each soil lift is limited to the amount of debris that may be placed with soil to achieve the required compaction criteria. Depending upon the conditions of the disposal agreement, some generators that have both soil and debris may be able to achieve cost savings by delivering these materials together such that the shipping package contains enough soil to mix with the debris to achieve compaction requirements. All debris must be placed in such a way to minimize void space in the soil lift.

3.2.2.2 Oversize Debris and Large Components

Waste material is considered oversize debris if the debris has at one dimension greater than 12 feet or does not have one dimension less than 10 inches. Since oversize debris cannot be compacted directly into the soil lifts, this material is placed in different areas of the disposal embankment where void spaces are minimized to the maximum extent practicable both in and around the debris.

Bulk oversize debris, such as a large component, is also disposed of using this alternative disposal process. Energy*Solutions* has received and disposed of several large components over 250 tons including steam generators, reactor heads, turbine components, and other large equipment as illustrated in Figure 3-2. Generators should identify these types of materials as part of the waste profiling process. This will allow Energy*Solutions* to evaluate the off-loading and placement of the large component prior to shipment.

Generally, single items over 20,000 pounds are considered large components and require special handling and engineering reviews prior to placement. The type of information required for large components includes drawings, photographs, weight, dimensions, description of enclosed voids, packaging configuration, rigging and loading plan, identification of lifting points, transportation mode, and radiological characterization and survey documentation. Generators are requested to provide this type of information as early as possible in the project planning to help facilitate safe, efficient offloading at Clive. Void spaces within large components must be made accessible via a minimum of two access ports to allow grout in-fill during disposal operations at the Clive disposal facility. Access ports must be at least four inches in diameter unless approved in writing by Energy*Solutions*. Containers of oversize debris must exclude soil or soil-like waste due to placement criteria. Generators should be aware that waste disposed as large components is required to be free of external contamination. The Large Component disposal cell is a radiologically non-contaminated area.

Energy*Solutions* may also elect to dispose of dispersible waste forms (e.g., filter cake, dusty material, etc.) or waste with elevated dose rates by not emptying the waste from the container. Although ion-

exchange media (resin) meets the standard size debris criteria, resins are not emptied from the container but grouted to minimize void spaces. Consequently, resin waste streams must be shipped under a resin specific waste profile unless approved in writing by Energy*Solutions*. Void spaces in and around the containers are minimized to the maximum extent practicable. Material that is excessively dusty cannot be disposed of as soil-like material and requires containerized disposal.

Figure 3-2. Large Component Disposal

3.2.3 Gaseous Waste

Energy*Solutions* is authorized to receive gaseous waste in accordance with Utah Administrative Code R313-15-1009(2)(a)(viii). Gaseous waste must be packaged at an absolute pressure that does not exceed 1.5 atmospheres at a temperature of 20 degrees Celsius and the total activity of any container shall not exceed 100 Curies. This information must be identified in the Radioactive Waste Profile Record.

3.2.4 Waste Containing Free Liquids

Wastes containing free liquids greater than one percent by volume are considered liquid waste streams. Generators may use visual inspection of the waste or the Paint Filter Liquids Test to determine if the waste contains free liquids. The Radioactive Waste Profile Record must describe the physical, chemical, and radiological characteristics of the liquid waste. Energy*Solutions* received approval from the Utah DWMRC to receive radioactive liquid wastes that are aqueous based. Non-aqueous radioactive liquids require case-by-case approval from the Utah DWMRC.

Energy*Solutions* may require a solidification study on a sample of the liquid waste prior to authorizing shipments. Energy*Solutions* has permitted liquid storage tanks to accommodate liquids delivered in tankers and other DOT approved bulk containers.

For generators with waste streams that may contain free liquids, the process by which the liquid will be minimized to less than one percent of the waste volume must be documented in the Radioactive Waste Profile Record. Approval of these waste streams would be considered authorized free liquids.

The presence of unauthorized free liquid within a package or shipment is a significant cause of non-compliance. Each incoming shipment will be tested for free liquids in accordance with Energy*Solutions*' Waste Characterization Plan using visual inspection of the waste or the Paint Filter Liquids Test.

If a solid waste shipment is found to contain unauthorized free liquids greater than one percent of the waste volume in any manifested container, Energy*Solutions* is required to promptly notify the generator and the Utah DWMRC. Energy*Solutions* may stop shipments of waste material until the cause of the problem is identified and corrected. The Waste Characterization Plan requires that the generator submit a quality control program that identifies the root cause of the problem and outlines corrective actions that will be taken to correct the problem and the quality control measures that will be implemented to prevent recurrence. Until this corrective action plan has been submitted, reviewed, and approved by Energy*Solutions*' Quality Assurance Manager, no further shipments may be permitted from the waste generator's site.

In order to control free liquid within the waste material, the use of absorbent materials is strongly recommended. Sufficient absorbent material to absorb twice the volume of the potential liquid should be used. Experience has shown that some soil matrices actually 'bleed' moisture out during transport due to vibration. If testing indicates that the waste material, as shipped, could exceed the optimum moisture content (as determined by the Standard Proctor Test) and that a risk of waste form separation exists while the shipment is en route, the precautionary addition of absorbents prior to shipment is strongly advised. To ensure that adequate absorbents are added, generators should also consider testing the moisture content of each shipment.

Although uncommon, in some cases it is possible for precipitation to enter the package resulting in free liquids. Detailed inspections should be completed before waste is placed in transit to ensure the package meets strong-tight criteria and that water cannot enter. Energy*Solutions* does not maintain a list of approved absorbents or manufacturers. If absorbents are added to the waste, the specific absorbent must be identified in the Radioactive Waste Profile Record.

3.3 PROHIBITED RADIOACTIVE AND MIXED WASTE

Condition 16 of the Radioactive Material License **prohibits** receipt of the following wastes:

- Sealed sources defined in UAC R313-12 as "radioactive material that is permanently bonded or fixed in a capsule or matrix designed to prevent release and dispersal of the radioactive material under the most severe conditions which are likely to be encountered in normal use and handling" (e.g., instrument calibration check sources, nuclear density gauges, etc.). The flow chart in Figure 3-3 provides further guidance on determining when items should be considered a sealed source for disposal purposes.
- Radioactive waste which is classified as Class B, Class C, or Greater Than Class C waste.
- Solid waste containing unauthorized free liquids.
- Waste material that is readily capable of detonation, of explosive decomposition, reactive at normal pressure and temperature, or reactive with water or air.
- Waste materials that contain or are capable of generating quantities of toxic gases, vapors, or fumes harmful to persons transporting, handling, or disposing of the waste.
- Waste materials that are pyrophoric. Pyrophoric materials contained in wastes must be treated, prepared, and packaged to be nonflammable. Neither pyrophoric solids, or potentially pyrophoric solids as defined below may be accepted:
- Ignitable (pyrophoric) solids: solid substances that under normal conditions (~standard temperature and pressure) are capable of causing fire through friction, absorption of moisture, or

spontaneous chemical change; or can be ignited readily and when ignited burns vigorously and persistently.

- Potentially ignitable (pyrophoric) solids: solid substances in which shavings or other small particles that may be generated through management of the material meets the definition of an ignitable material.

  Note: As mentioned in Section 3.1.16, Reactive Metals may be accepted for treatment on a case-by-case basis under certain conditions. Technical Services staff may be contacted to determine deactivation at Energy*Solutions* is a viable alternative.

- Waste materials containing untreated biological, pathogenic, or infectious material including contaminated laboratory research animals. Generators desiring to ship this type of waste must document in the Radioactive Waste Profile Record the process used to treat the potential non-radiological hazard. Sharps including needles, scalpels, knives, syringes, pipettes, and similar items having a point or sharp edge or that are likely to break during transportation must not be packaged in bulk containers unless written approval is given by Energy*Solutions*. When these items are used in the medical industry or related research, they must be treated to remove the biohazard. Documentation of such treatment must be included in the Waste Profile.

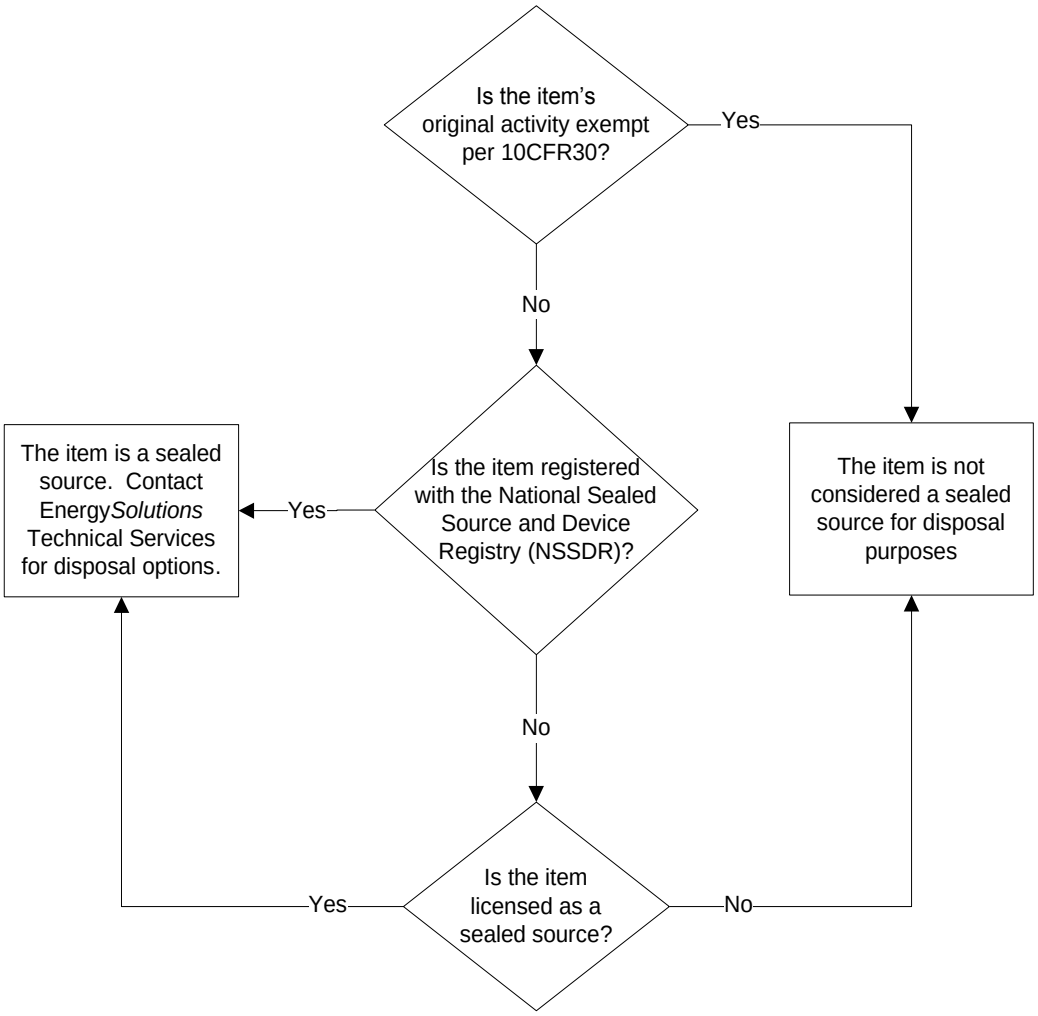


Figure 3-3. Sealed Source Determination Flowchart

The following Mixed Wastes are **not** acceptable for treatment or disposal at the Mixed Waste facility:

- Hazardous waste that is not also a radioactive waste
- Wastes that react violently or form explosive reactions with air or water (without written approval by Energy*Solutions*)
- Pyrophoric wastes and materials (without written approval by Energy*Solutions*)
- DOT Forbidden, Class 1.1, Class 1.2 and Class 1.3 explosives
- Shock sensitive wastes and materials
- Compressed gas cylinders, unless they meet the definition of empty containers
- Utah waste codes F999 and P999

SECTION 4

WASTE ACCEPTANCE PROCESS

4.1 WASTE PROFILING PROCESS

This section details Energy*Solutions*' waste characterization and profiling process. Profiling a waste stream involves collecting samples and obtaining analytical results for the parameters specified on Energy*Solutions*' Radioactive Waste Profile Record (Waste Profile). The Waste Profile serves the following functions: (1) enables Energy*Solutions* to evaluate wastes for acceptance, (2) maintains an operating record for the material during acceptance, storage, treatment, if applicable, and disposal of waste shipments, (3) provides a historical record of the waste project for each waste stream, and (4) ensures compliance with Energy*Solutions*' licenses and permits. The Waste Profile and related instructions can be downloaded from Energy*Solutions*' web site Customer Portal tab at www.energysolutions.com. In addition, Energy*Solutions* has developed an online Customer Portal profiling and manifesting system that allows customers to complete the profiling information online as well as submission of scheduling requests and manifests. The Customer Portal is accessible via the Energy*Solutions* website. An Energy*Solutions* Technical Services Representative is also available to assist in the waste profiling process.

The waste profiling process consists of the following steps as illustrated in Figure 4-1:

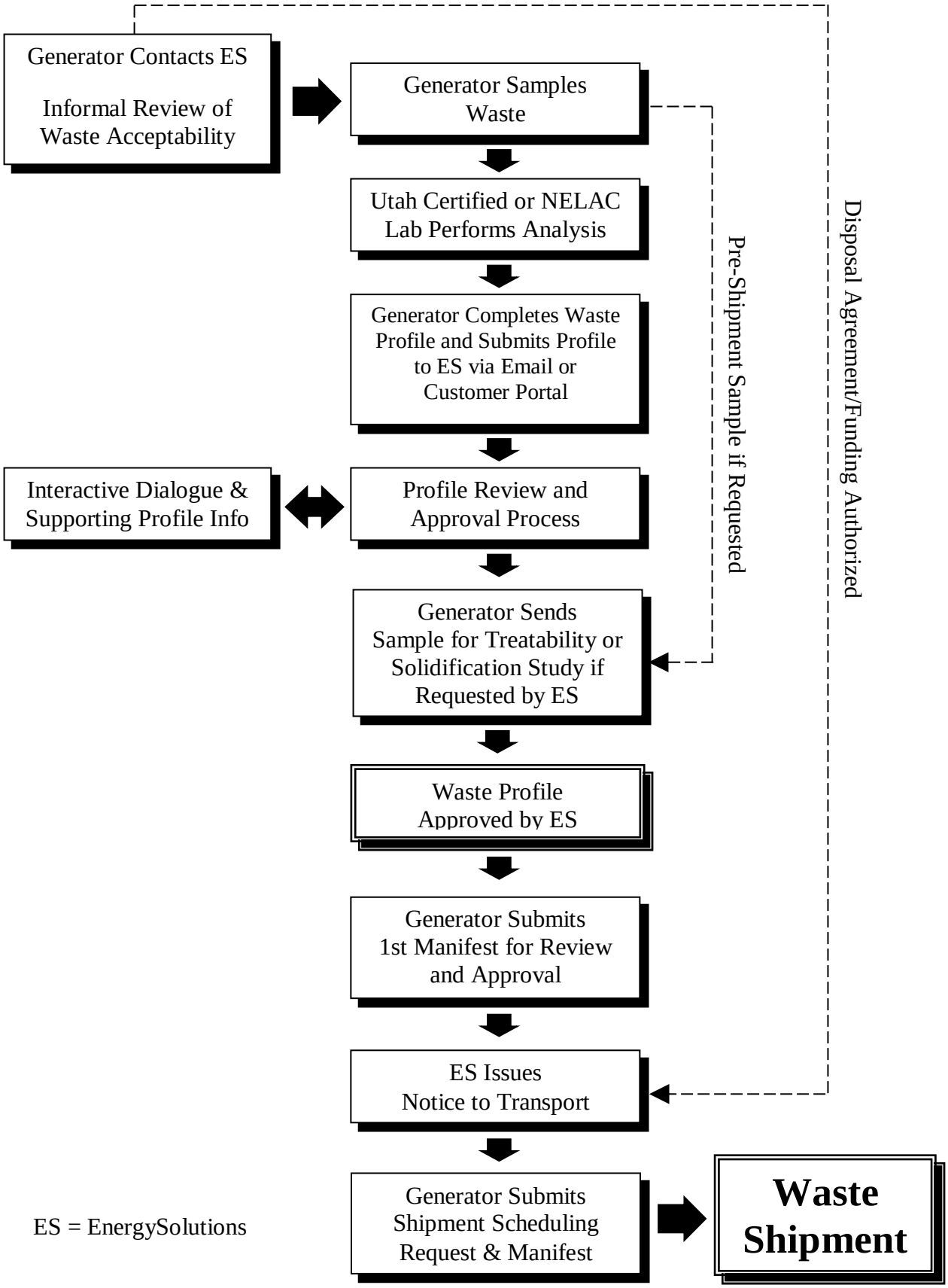
- Initial discussions
- Waste characterization
- Waste Profile Record completion and submittal
- Treatability and/or solidification study sample submitted, if requested
- Profile review and approval
- Notice to Transport

Initial discussions of the waste stream are critical in ensuring that the waste profiling process is accurate and efficient. Technical Services representatives are a resource to the generator in completing this process.

4.2 WASTE CHARACTERIZATION

Early in the process, the generator samples the waste stream where applicable and begins to accumulate the analytical data required in the waste profile record described below. It is critical that chemical analyses are performed by laboratories certified by either the State of Utah or the National Environmental Laboratory Accreditation Conference (NELAC). Generators may contact the Utah Department of Health at (801) 965-2588 or visit their website at http://health.utah.gov to obtain information on the Utah Laboratory certification requirements. Laboratories certified by NELAC are listed on the NELAC website at www.nelac-institute.org. Technical Services representatives can also provide current laboratory certification information. Once the analytical support data is available, the generator completes the Waste Profile record as described in the following section.

Figure 4-1. Waste Acceptance Process



4.3 RADIOACTIVE WASTE PROFILE RECORD

The waste profile record is a document required by Energy*Solutions*' licenses and permits. It provides information in the following areas:

- Generator and waste stream information
- Physical properties and packaging
- Radiological information
- Chemical composition and hazard evaluation

Waste generators must complete a Radioactive Waste Profile Record for every waste stream shipped to Energy*Solutions*. To complete this form, the generator should use process knowledge along with analytical laboratory results. The waste profiling information is now able to be completed via the online Customer Portal. Generators should use the Customer Portal to submit this information. The form contains the following information.

- Generator and Waste Stream Information
  These sections request generator contact information and general overview of the type of waste material, physical characteristics, transportation and package modes, identification of specific radionuclides, and the average and range of radionuclide concentrations.

- Chemical and Hazardous Waste Characteristics (LLRW or MW)
  The generator selects the applicable attachment for describing the chemical properties for either LLRW or Mixed Waste. These attachments request the chemical information to evaluate the waste relative to RCRA regulations. Only one of these attachments is required to be signed and submitted to Energy*Solutions* with the Waste Profile.

- SNM Exemption Certification
  This form requests the radiological information to evaluate waste containing SNM with respect to the SNM Exemption issued by the NRC and incorporated into Energy*Solutions*' license. Condition 3 of the SNM Exemption Certification form requests specific information to be included with the narrative of the Waste Profile.

- PCB Waste Certification
  This form requests information about the type of Polychlorinated Biphenyls (PCBs) waste included with the waste stream. PCB waste streams must be profiled separately from non-PCB waste streams. Energy*Solutions* uses this form and supporting information to evaluate PCB waste streams with respect to Energy*Solutions*' permits and TSCA regulations in 40 CFR 761.

4.3.1 Generator and Waste Stream Information

This section includes contact information for generators, including addresses and responsible parties. The contact information is required for the generator's representative as well as for the individual completing the Waste Profile. The generator must answer a series of questions designed to categorize the waste material that is profiled. The generator identifies the following:

- If the waste is hazardous, and whether it has been treated or requires treatment at Energy*Solutions*
- If the waste is Low-Level Radioactive Waste and subject to LLRW Compact Export approval
- If the waste contains Special Nuclear Materials, PCBs, or asbestos

4.3.2 Waste Physical Properties and Packaging

The physical and geotechnical properties of the waste include gradation of the material, density range, a full description of the physical composition and characteristics of the waste, moisture content, optimum moisture, and maximum dry density determined by the Standard Proctor Method (for soil or soil-like materials).

The purpose of the physical and geotechnical testing requirements is to demonstrate that the material can be managed at the Clive facility under existing license/permit requirements and in accordance with Energy*Solutions*' waste disposal placement methods.

The gradation of the waste may be determined through analysis or waste process knowledge. After an assessment of the entire waste stream, the generator is expected to estimate the amount of material that would pass through the various screens indicated. This information is necessary to determine the method of waste placement.

In this section, the generator addresses questions regarding free liquids. If the waste contains free liquids, the Waste Profile requires a description including the quantity and nature (aqueous or non-aqueous) of the liquid. Solid waste profiled to contain incidental free liquids must be minimized to the maximum extent practical but in no case shall the free liquid exceed one percent of the waste volume upon arrival and inspection at the Clive facility. Waste streams containing PCBs must not contain any free liquids unless shipped for VTD treatment.

The waste description is continued by addressing several items in a narrative description and history of the waste provided by the generator in the narrative section of the online waste profile or as an attachment, referred to as Attachment B.5. The narrative should include the following items as applicable:

- The process that generated the waste
- Waste material physical composition and characteristics
- Radiological and chemical characterization method
- Information requested on the SNM Exemption Certification form, if applicable
- The type and description of PCB waste, if applicable
- Basis for determining manifested radionuclide concentrations
- Description and amounts of absorbents, if applicable
- Basis of non-hazardous or hazardous waste determinations
- Treatment processes, if applicable
- Product information or Material Safety Data Sheets associated with the waste as applicable
- Information requested in other sections of the Waste Profile

4.3.3 Radiological Information

All waste streams must be analyzed to determine the radionuclide concentrations in the waste. The waste must be characterized via gamma spectroscopy, liquid scintillation, or other standard radiochemistry methods to determine the radionuclide concentrations in the waste. Indirect measurements such as dose-to-curie or use of scaling factors may also be used if the process has been validated with direct measurements. Radiological analysis does not need to be performed by Utah or NELAC Certified laboratories. Non-gamma emitting radionuclides such as Fe-55 and Ni-63, may be scaled from the gamma spectral analysis obtained from testing the material if the waste generator has specific process knowledge of the material being profiled (10 CFR Part 61 analyses).

Please note that discrepancies between radiological information, particularly concentration ranges, and waste manifest documents could delay or prevent acceptance of a shipment. The Waste Profile must always be reviewed with the waste manifest documents prior to shipping waste to Energy*Solutions*. In the event that radiological, physical, or chemical properties of a profiled waste stream have changed, an update to the Waste Profile must be submitted and approved before such waste can be shipped to Energy*Solutions*.

Energy*Solutions* requires that generators evaluate the maximum dose rates and contamination levels anticipated in each waste stream. In the radiological section of Waste Profile, the generator indicates whether or not the maximum dose rate on accessible surfaces exceeds the ALARA Criteria as described in Section 2.3.1.

While the Clive facility is permitted to receive Class A LLRW, certain radionuclides are subject to additional controls established by the Utah DWMRC. For example, Radium-226 is limited to 10,000 pCi/g. In addition, the Utah DWMRC regulates the following radionuclides under Condition 29E of Energy*Solutions*' Radioactive Materials License:

- Berkelium-247
- Calcium-41
- Chlorine-36
- Iodine-129
- Rhenium-187
- Technetium-99

Energy*Solutions* is required to provide a one-time notice for each generator shipping one of these radionuclides to the Class A disposal embankment. For waste shipped for disposal at the Mixed Waste disposal embankment, Energy*Solutions* must provide a one-time notification for each generator shipping waste containing Chlorine-36 and Berkelium-247. The generator includes the anticipated presence of these nuclides in the radiological information provided in the Waste Profile.

Finally, the generator lists the radionuclides present in the waste stream in conjunction with the expected maximum manifested concentration and the weighted average concentrations expected for each radionuclide. The generator is expected to manifest values for each shipment that are within the maximum values stated in this section of the Waste Profile. In the event that a generator needs to ship waste to Energy*Solutions* that exceeds the limits in the radiological information section of the Waste Profile, the generator may submit a revised Waste Profile to Energy*Solutions* for review and approval.

Any additional information including laboratory results for gamma spectroscopy or radiochemistry analysis must be attached to the Waste Profile. Radiological characterization methods and the basis for determining manifested radionuclide concentrations should be included in the waste description narrative as described above.

4.3.4 Chemical Composition and Hazardous Waste Evaluation

In accordance with the response to the hazardous waste question posed in the generator and waste stream information section, the generator provides one of two attachments with the Waste Profile addressing the chemical composition of the waste.

For hazardous wastes, the generator provides a completed and signed copy of the Hazardous Waste Analysis Certification Attachment. The chemical and hazardous characteristics of the waste stream must

be provided in extensive detail. The purposes of chemical testing are to (1) demonstrate that the waste meets specific waste acceptance chemical requirements; and (2) demonstrate that the waste is either non-hazardous, compliant with RCRA treatment standards, or will require treatment prior to disposal. In addition, analysis is required to qualify wastes that may contain other specific regulated constituents.

Energy*Solutions*' licenses and permits require the results of the following minimum analyses be provided with the Waste Profile:

Analysis	**EPA SW-846 Method(s)**
pH (liquids only)	Method 9045
PFLT (solid waste only)	Method 9095
Organics (Totals) Results from applicable concentration based treatment standards	Method 8260 & 8270

The results of these analyses are documented on the Hazardous Waste Analysis Certification Attachment and attached to the Waste Profile.

The Hazardous Waste Analysis Certification Attachment also includes waste codes applicable to the waste stream with corresponding treatment standards or technology codes and worst case concentrations. This information is critical in evaluating wastes for treatment at Energy*Solutions*.

Applicable Underlying Hazardous Constituents (as defined in 40 CFR 268.48) and other chemicals present are identified at the end of the attachment.

For non-hazardous waste streams, the generator provides a signed copy of the Low-Level Radioactive Waste Certification Attachment. Energy*Solutions*' licenses and permits require the results of the following analyses be provided with the Waste Profile:

Analysis	**EPA SW-846 Method**
pH (liquids only)	Method 9045
TCLP Metals	Method 6010/7470
TCLP Herbicides	Method 8151
TCLP Pesticides	Method 8081
TCLP Semi-volatiles	Method 8270
TCLP Volatiles	Method 8260

The individual chemical compounds required for these analyses are listed on the Low-Level Radioactive Waste Certification Attachment and correspond to the characteristic D-list constituents (D004 through D043) identified in 40 CFR 261.24 Table 1 as shown below.

40 CFR 261.24 Table 1

TABLE 1—MAXIMUM CONCENTRATION OF CONTAMINANTS FOR THE TOXICITY CHARACTERISTIC

EPA HW No.[1]	Contaminant	CAS No.[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	[4] 200.0
D024	m-Cresol	108–39–4	[4] 200.0
D025	p-Cresol	106–44–5	[4] 200.0
D026	Cresol	.....	[4] 200.0
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	[3] 0.13
D012	Endrin	72–20–8	0.02
D031	Heptachlor (and its epoxide).	76–44–8	0.008
D032	Hexachlorobenzene	118–74–1	[3] 0.13
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	Pentrachlorophenol	87–86–5	100.0
D038	Pyridine	110–86–1	[3] 5.0
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
D041	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.

The attachment also includes a question as to whether or not the waste was at the point of generation of a hazardous waste, and a section to address former hazardous waste codes and additional chemical constituents.

As stated previously, the chemical analysis must be performed by a laboratory holding a NELAC or State of Utah certification. Data provided to the generator prior to any discussions of waste characterization with Energy*Solutions* may be acceptable for waste profiling purposes upon investigation of associated quality control sample data.

Energy*Solutions* may waive the chemical laboratory analyses if the material is not amenable to chemical sampling and analysis (e.g., debris items including metal pieces, concrete, plastic, etc.). Justification for waiving the chemical analyses must be provided in the waste profile narrative. Technical Service representatives can provide direction in cases where the waste meets such a description.

4.3.5 Special Nuclear Material Exemption Certification Form

Waste containing Special Nuclear Material (SNM) must comply with the SNM requirements for concentration, spatial distribution, chemical mixture, solubility and chemical composition of SNM isotopes as described in Section 3.1.5 of the BWF WAC. The SNM Exemption Certification form guides the generator through the supporting information that must accompany the Waste Profile and each shipment of waste containing SNM. In addition to answering the questions on the form, the generator includes descriptions in waste profile narrative for the requirements listed in items 3(a) through 3(d) of the SNM form. A completed and signed copy of the SNM Exemption Certification form must accompany the shipping paperwork for waste shipments containing Special Nuclear Material. The SNM information may also be completed in the online Customer Portal.

4.3.6 PCB Waste Certification Form

Energy*Solutions*' Statue-Issued Part B Permit and Groundwater Quality Discharge Permit include the authorizations and requirements for Energy*Solutions* to receive PCB waste regulated for disposal under 40 CFR 761. The PCB waste types acceptable at Energy*Solutions* are listed in Section 3.1.6 of the BWF WAC. The generator must include a description of the type of PCB waste in the narrative of waste profile. The PCB Waste Certification form does not need to accompany the waste shipment unless requested by Energy*Solutions* during the Waste Profile approval process. The PCB information may also be completed in the online Customer Portal.

4.4 TREATABILITY AND SOLIDIFICATION STUDY SAMPLES

For waste streams requiring treatment or solidification, Energy*Solutions* will request a preshipment sample to perform a treatability and/or solidification study during the waste profiling approval process. This allows Energy*Solutions* to develop the necessary treatment and solidification formula prior to receipt of the waste. Preshipment samples are not required for waste streams requiring treatment via macroencapsulation. Energy*Solutions* may request additional preshipment samples during the waste profiling process to evaluate the waste material prior to receipt.

Preshipment samples should represent the waste material destined for shipment to Energy*Solutions*. Representative sampling techniques appropriate to radiological and hazardous wastes should be employed in obtaining these samples. Treatability study samples should represent the "worst case" for a waste stream destined for treatment at Energy*Solutions*. The samples should contain the highest anticipated levels of chemical contaminants in the waste steam to ensure that Energy*Solutions* can develop a treatment formula that is adequate for the entire waste stream. Energy*Solutions* may be required to perform additional treatability studies if the waste shipments contain chemical constituents of concern at concentrations that are higher than the treatability study sample.

Preshipment samples may not be shipped to the Energy*Solutions'* Clive facility without prior authorization. At a minimum, a preliminary Waste Profile will need to be prepared and submitted that describes the waste and its generation. This preliminary Waste Profile must include both chemical and radiological assessments and must be approved by Energy*Solutions* prior to shipment of the sample. When approved for shipment, Energy*Solutions* will provide a Preshipment Sample Authorization Record to the generator.

Samples should be packaged into one or more sealed containers in such a manner that the sample container will not break during normal shipping conditions. Generally, the volume of sample requested will be less than 5 gallons. Sample containers should be labeled with the waste stream number, date, and a sample ID number. Sample closure devices should also be sealed with a custody or anti-tamper seal to ensure sample integrity.

Preshipment samples sent to Energy*Solutions* must be properly classed, described, packaged, marked, labeled, and in condition for transport as required by the DOT Hazardous Materials Regulations (HMR) contained in 49 CFR Parts 171 through 180. The Preshipment Sample Authorization forms must be completed and attached to the outside of the shipping package. A Uniform LLRW Manifest (Forms 540/541) must also accompany the shipping paperwork. The manifest number for the shipping paperwork is the Waste Stream ID number (e.g., XXXX-YY). The samples must be sent to the following address:

Energy*Solutions*
Attention: Sample Control
US I-80, Exit 49
Tooele County
Clive, UT 84029 (84083 if using Fed Ex)
Phone: (801) 649-2175

Treatability studies normally require 30 to 45 days to complete. Please keep this in mind when planning the first shipment of waste. Rush treatability studies are possible; however, there are higher costs for this service. Please contact Energy*Solutions* if a rush treatability study is required to meet a disposal schedule.

4.5 WASTE PROFILE REVIEW AND APPROVAL

Energy*Solutions* will assist waste generators throughout the waste profiling process to ensure shipping and acceptance of the waste can be accomplished within the desired timeframe. In order to facilitate timely shipment and receipt of waste materials, Energy*Solutions* requests that the Waste Profile forms and analytical reports be provided as far in advance of the anticipated shipping date as possible. Upon receipt, Energy*Solutions* will complete a preliminary review of the waste profile information provided. Comments concerning the Waste Profile will usually be provided within two weeks of Energy*Solutions*' receipt of the profile information. If additional information is required for pre-acceptance, Energy*Solutions* will specify the information needed and communicate this to the generator. A comprehensive internal review is completed once all information has been submitted.

In order to assist each generator and accomplish the profile review and approval process as quickly as possible, Energy*Solutions* has developed a two-phase review process. During the first phase, an Energy*Solutions* Technical Services Representative will review and assess the Waste Profile, accompanying documentation, and analytical data for acceptability. If necessary, Energy*Solutions* will provide comments that delineate additional information needed for approval. This process typically takes one to two weeks. Once the additional information or revisions have been received by Energy*Solutions* and found to be satisfactory, phase 2 of the process begins.

The second phase involves an independent evaluation of the Waste Profile by Energy*Solutions*' Health Physics, Compliance, Operations, and Safety and Health representatives. Energy*Solutions* will notify the generator as soon as the review and approval process is complete. The online Customer Portal allows the

customer to view the status of the profile as it is being reviewed and approved by Energy*Solutions* and will provide notification via email when the profile is approved.

At this point, the waste stream has been "pre-approved" for management at Energy*Solutions*, since the waste has been shown to be in compliance with all waste acceptance criteria. Energy*Solutions* will issue a Notice to Transport once the Waste Profile has been approved and a contractual disposal agreement or necessary funding is authorized for the waste stream. All profile information and related approvals can be viewed in the Customer Portal.

4.6 NOTICE TO TRANSPORT

Energy*Solutions* will issue a Notice to Transport (NTT) to the generator that authorizes subsequent waste shipments. The Notice to Transport is completed and issued once the Waste Profile is completed and approved by Energy*Solutions* and is uploaded to the "Attachments" tab in the Customer Portal. A Notice to Transport is also issued in the following situations:

- The Waste Profile is revised in such a way that additional evaluations are required (radiological, chemical, or physical properties change significantly)
- An annual update letter is received for Mixed and LLRW waste streams
- The approval to ship is restored after the Notice to Transport is suspended

In the event that the Notice to Transport is suspended, customers will not be able to schedule shipments until the approval to ship is restored and a new NTT is issued.

SECTION 5

SHIPMENT SCHEDULING AND MANIFESTING

5.1 GENERATOR SITE ACCESS PERMIT

Prior to the first shipment of waste material to Energy*Solutions*' Clive facility, generators must receive a Generator Site Access Permit (GSAP) issued by the Utah DWMRC. Utah Administrative Code R313-26 establishes the terms for a Generator Site Access Permit Program that authorizes waste generators, waste processors, and waste collectors to deliver radioactive wastes to a disposal facility within Utah. Generators may apply for the GSAP on-line at the Utah DWMRC's website at www.deq.utah.gov/Permits/radiation/gensiteaccess. Generators should be aware that the length of time the Utah DWMRC takes to process a GSAP application or annual renewal is typically thirty days.

The GSAP number must be listed in Block 5 of the Uniform LLRW Manifest Form 540 and correspond to the shipper's name and facility. Shippers must ensure the GSAP is renewed annually with the Utah DWMRC.

Shippers are subject to the provisions contained in the "Generator Site Access Permit Enforcement Policy" as amended, UAC R313-14, and UAC R313-19-100 for violations of state rules or requirements in the current land disposal facility operating license regarding radioactive waste packaging, transportation, labeling, notification, classification, marking, or manifesting requirements.

5.2 SHIPPING CHECKLIST

To assist generators with shipments to Energy*Solutions*, the "Shipping Checklist" shown below in Figure 5-1 provides general contact, scheduling, and manifesting information. Generators and shippers should use this checklist in conjunction with their shipping procedures to ensure compliance with Energy*Solutions*' waste acceptance process. Energy*Solutions*' Technical Service Representatives are available to assist generators and shippers during the shipment scheduling and transportation process. The online Customer Portal allows generators and shippers to schedule waste shipments, validate manifests, and submit manifests in lieu of submitting hard copy of these forms in advance of the shipment.

5.3 5 WORKING-DAY ADVANCED SHIPMENT NOTIFICATION

Generators must schedule the shipment to arrive at the facility a minimum of five working days prior to the requested shipment arrival date. Energy*Solutions* strongly encourages generators to submit the schedule request via the online Customer Portal prior to the shipment departing from the generator's site. Once the schedule request has been received, the Scheduling Department will confirm the shipment's arrival date with the shipper via the Customer Portal. If all required information is not available at the time of submission, updates may be provided as the information becomes available. The Scheduling Department must be informed in the event that there are delays in the shipment scheduled arrival date.

Scheduling: Must be established at least 5 working days in advance of requested arrival date

- ☐ A "Notice to Transport" has been issued by Energy*Solutions* for the Waste Profile.
- ☐ Submitted "5 Working Day Advanced Shipment Notification" form to request shipping schedule or submitted via the Customer Portal. Email form to scheduling@energysolutions.com.
- ☐ Shipping schedule has been confirmed by Energy*Solutions*.
  Energy*Solutions*' Shipping & Receiving Scheduler: (801) 649-2166.

Advanced Manifesting: Must be submitted prior to releasing each shipment/conveyance

- ☐ Manifested information is consistent with the approved Waste Profile.
  Verify that all manifested radionuclides are listed in the approved Waste Profile and that manifested concentrations do not exceed the approved ranges.
- ☐ Verified consignee information on manifests (see below).
  Consignee: Energy*Solutions*, LLC
  Clive Disposal Site
  Interstate 80, Exit 49
  Clive, UT 84029
  Contact: Security Department
  Phone: (801) 649-2175
- ☐ Verified Shipment ID/Manifest Number (XXXX-YY-ZZZZ)
  XXXX is the generator number, YY is the waste stream number, and ZZZZ is the shipment number (starting with 0001 for the first shipment/conveyance and incrementing by one for each additional shipment/conveyance). If a Hazardous Waste Manifest is submitted, include the Shipment ID Number in Block 14.
- ☐ Verified valid Utah Site Access Permit number in Block 5 on Form 540. Generators must apply for the permit with the Utah Division of Waste Management and Radiation Control (DWMRC). The Shipper Name and Facility must be consistent with the Utah Site Access Permit number.
- ☐ Verified that Block 9 of Form 540 specifies Energy*Solutions*' "Treatment Facility" or "Bulk Waste Facility". Enter "Bulk Waste Facility" for LLRW, 11e.(2) Byproduct Material, and Mixed Waste shipped for direct disposal or enter "Treatment Facility" for waste streams requiring treatment by Energy*Solutions* prior to disposal.
- ☐ Submitted manifests to Energy*Solutions* **at least three working days** prior to the shipment arrival date. If possible, please export the manifests and send electronically via the online Customer Portal or email to manifest@energysolutions.com.. If applicable, include the LDR Notification/Certification forms, Hazardous Waste Manifest, and SNM Exemption Certification form.

Shipment Paperwork and Inspection

- ☐ The original shipping paperwork/manifests accompany each shipment (conveyance). If applicable, include the LDR Notification/Certification forms and Hazardous Waste Manifest for each shipment.
- ☐ If applicable, a completed and signed copy of the SNM Exemption Certification form and DOE/NRC form 741 has been included with the shipping papers.
- ☐ If applicable, the Uniform Hazardous Waste Manifest lists all hazardous waste codes associated with the shipment.
- ☐ Containers have been inspected and comply with DOT packaging requirements. Waste must be packaged in a strong, tight container at a minimum.
- ☐ Containers do not contain unauthorized free standing liquids.
- ☐ If applicable, containers are labeled "**Class A Unstable**" or "**Class AU**". Refer to Block 16 of NRC Form 541.

Figure 5-1. Shipping Checklist

Shipments containing radionuclides with total activities exceeding the limits listed below must be specified on the 5 Working-Day Shipment Notification form and approved prior to waste shipment.

- Californium-252 (in excess of 5.4 Ci)
- Co-60 (in excess of 8.1 Ci)
- Cs-137 (in excess of 27 Ci)
- Gd-153 (in excess of 270 Ci)
- Ir-192 (in excess of 22 Ci)
- Pm-147 (in excess of 11,000 Ci)
- Se-75 (in excess of 54 Ci)
- Tm-170 (in excess of 5,400 Ci)
- Yb-169 (in excess of 81 Ci)

5.4 SHIPPING PAPERWORK

Advance copies of the Uniform Low-Level Radioactive Waste Manifest (Forms 540/541, and 542 if applicable) are required to be sent to Energy*Solutions* at least three working days prior to the shipment arrival date. Shippers must submit the shipping paperwork electronically via the online Customer Portal or email to manifest@energysolutions.com. Energy*Solutions* encourages submittal of the Uniform LLRW Manifest electronically by exporting the manifest information to a specified file format as discussed below. The advance manifest must include the Uniform LLRW Manifest, and if applicable, LDR Notification/Certification forms, Uniform Hazardous Waste Manifest, and SNM Exemption Certification form.

Additional shipping paperwork may be required depending on the type of waste being shipped to Energy*Solutions*. Multiple waste streams on a single conveyance must include a unique set of shipping paperwork for each manifested shipment. The following paperwork may also need to accompany the shipping paperwork as applicable:

- SNM Exemption Certification form. This form must be completed, signed, and included with the shipping paperwork for shipments containing Special Nuclear Material.

- LDR Certification and/or Notification form must contain the information required in 40 CFR 268.7. Energy*Solutions* requires that this information be provided with each shipment of Mixed Waste or waste that has been treated to meet 40 CFR 268 treatment standards.

- Uniform Hazardous Waste Manifest must be included with the shipping paperwork for waste shipments of Mixed Waste. As applicable, Energy*Solutions* requests that shippers list the gross weight on the manifest.

- Compact Export Authorization letter as applicable. Contact a Technical Services representative for additional guidance. The Energy*Solutions'* LLRW Export Approval procedure (Procedure CL-AD-PR-030) may be reviewed at the Customer Portal tab of the www.energysolutions.com website.

5.4.1 Instructions for the Uniform LLRW Manifest Forms 540, 541, and 542

The NRC's guidance document "Instructions for Completing the NRC's Uniform Low-Level Radioactive Waste Manifest" (NUREG/BR-0204, Rev. 2, July 1998) should be used by shippers when preparing the shipping paperwork. Energy*Solutions* requires shippers to include information in both metric units and English units following the International Standard of Units (SI). Additionally, Energy*Solutions* has specific

information that should also be included on the Uniform LLRW Manifest. The generator is encouraged to ensure that all isotopes listed on the NRC shipping forms have been included in the waste profile.

Form 540

- Block 5, "Shipper" must list the shipper's company name and facility that corresponds to the Utah Generator Site Access Permit (GSAP) number. Shippers shipping on behalf of the generator and using their GSAP number should list "(shipper's company name) on behalf of (generator's name)".

- Block 5, "Shipment Number" may be used by the shipper for their own tracking purposes. The "Shipment ID Number" is the unique shipment approval number (e.g., U12345) that is issued when the shipment schedule request has been approved via the Customer Portal.

- Block 8, "Manifest Number" must list the Energy*Solutions* shipment number in the following format: (XXXX-YY-ZZZZ) where XXXX is the generator number, YY is the waste stream number, and ZZZZ is the shipment number (starting with 0001 for the first shipment and incrementing by one for each additional shipment).

- Block 9, "Consignee" must list Energy*Solutions*' disposal site address as shown below, contact name and telephone number. The address must specify Energy*Solutions*' "Treatment Facility" or "Bulk Waste Facility". List "Bulk Waste Facility" for LLRW, 11e.(2) Byproduct Material, and Mixed Waste shipped for direct disposal or list "Treatment Facility" for waste streams requiring treatment by Energy*Solutions* prior to disposal.

  Energy*Solutions*, LLC
  Clive Disposal Site – Bulk Waste Facility
  Interstate 80, Exit 49
  Clive, UT 84029

Form 541

- Block 6, "Container Description" specifically applies to the disposal container. For bulk shipments (e.g., gondola railcars, intermodals, etc.), list "11" for "Bulk, Unpackaged Waste" along with the bulk packaging descriptor if the bulk package does not contain other manifested packages inside. For example, a gondola railcar with a super-load wrapper would be listed as "11A" in Block 6.

- Blocks 7 and 8, "Volume" and "Waste and Container Weight" must list the gross volume and weight of the disposal container and contents. For bulk, unpackaged waste where the waste package will not be disposed (e.g., gondola railcar, intermodal, etc.), list the weight and volume of the waste.

- Block 15, "Radiological Description" must also include a column for the radionuclide concentration expressed in units of pCi/g.

- Block 16, "Waste Classification" must list "AU" for Class A Unstable LLRW. Waste packages must also be labeled either "Class A Unstable" or "Class AU". For NORM or 11e.(2) waste material, enter "N/A" since the waste classification requirements are not applicable.

Form 542

Form 542, "Manifest Index and Regional Compact Tabulation) is required for processors and collectors of LLRW who are shipping LLRW attributed to others for ultimate disposal at Energy*Solutions*. Energy*Solutions* requires that processors or collectors submitting the Form 542 do so electronically using the file transfer protocol described in Section 5.4.2 due to the size of the manifest. Processors that are authorized by their license to attribute the waste to their license must submit attribution information for each shipment. Please contact a Technical Services representative for the specific format required for the attribution information.

5.4.2 Electronic Submittal of the Uniform LLRW Manifest

Energy*Solutions* developed a document titled "Electronic Submittal of the Uniform Low-Level Radioactive Waste Manifest" to assist generators with the electronic submittal of the Uniform Low-Level Radioactive Waste Manifest (Forms 540, 541 and 542). Generators are able to submit their manifests electronically in a comma-delimited file format to the Energy*Solutions* disposal facility for review and distribution. Manifests are imported directly into Energy*Solutions*' waste tracking system via the Customer Portal and the manifest information is validated with initial screening checks to ensure key information is correct. Shippers that use the Customer Portal are provided with a validation report for each validated manifest. Manifest information is checked against the information contained in the generators Waste Profile. Any discrepancy will be automatically flagged, allowing potential problems to be fixed well in advance of shipment arrival. Shippers are responsible to make sure the information on the manifest is accurate.

Electronic manifest submittal via the Customer Portal has numerous benefits for both the generator and Energy*Solutions* which include:

- The import of manifest information directly to Energy*Solutions*' waste tracking system will eliminate manual data entry.
- Electronic submittal will significantly reduce the time it takes Energy*Solutions* personnel to process the advanced paperwork.
- The manifest information can be validated prior to shipment.

5.5 90-DAY SHIPPING FORECAST

The 90-Day Shipping Forecast is used by Energy*Solutions* to properly staff and ensure adequate resources are available to ensure efficient and timely management of waste shipments. Generators are strongly encouraged to provide Energy*Solutions* with a 90-Day Shipping Forecast for all upcoming shipments. Current shippers will receive an email from Energy*Solutions* every month and are requested to return the shipping forecast to Energy*Solutions* within three working days of receipt. The forecast can also be emailed to the appropriate Client Service Manager.

SECTION 6

PACKAGING AND TRANSPORTATION

6.1 COMPLIANCE WITH TRANSPORTATION REGULATIONS

Each shipment of waste material sent to Energy*Solutions* for disposal must be properly classed, described, packaged, marked, labeled, and in condition for transport as required by the Department of Transportation (DOT) Hazardous Materials Regulations (HMR) contained in 49 CFR Parts 171 through 180. Shipments of radioactive waste that are exempt from DOT regulations must be shipped to Energy*Solutions*' disposal site in packages that prevent release of the waste during transit. Specifically, all waste packages must be secure to 1) prevent rain or snow from entering the manifested waste package and 2) prevent waste from being exposed to the environment at any time during transit. Shippers should review NRC IE Bulletin No. 79-19 for training requirements applicable to radioactive waste management.

Energy*Solutions* will inspect each shipment arriving at its disposal facility for compliance with the applicable licenses and/or permits including compliance with DOT HMR requirements. Energy*Solutions* will notify the generator of a non-compliant shipment and determine the best course of action to resolve the discrepancy in a safe, compliant, and timely manner.

6.2 WASTE PACKAGING GUIDELINES

Energy*Solutions* receives waste for disposal either in bulk or in non-bulk packages. The packaging used must be authorized for the specific material being shipped by the HMR. Each generator is responsible for ensuring that the packaging used meets the appropriate regulations. The shipper of waste material is responsible for the certification of the packaging as meeting the DOT requirements. The DOT and NRC have published a joint guidance document to assist shippers of LSA and SCO material. The title of this document is "Categorizing and Transporting Low Specific Activity Materials and Surface Contaminated Objects" (NUREG-1608 or RSPA Advisory Guidance 97-005). The document is available from either agency. The following minimum packaging requirements must be met for all packages received at Energy*Solutions*.

6.2.1 Bulk Packaging

Generators are able to minimize packaging and transportation costs by utilizing bulk packages that are intended for re-use. Energy*Solutions* receives various bulk packages illustrated in Figure 6-1 which include gondola railcars with either hard-top lids or super-load wrappers, intermodals, sealands, cargo containers, roll-offs, etc. Bulk packages are unloaded at Energy*Solutions* and then decontaminated, surveyed, and returned in accordance with the requested radiological release criteria specified in Section 6.5. Bulk packaging must conform to the following requirements:

- Bulk packaging must, at a minimum, meet the applicable requirements contained in 49 CFR 173.24, General Requirements for Packaging and Packages and in 49 CFR 173.410, General Design Requirements.
- Bulk packaging must be covered. The top must be completely enclosed with no opening along the sides or openings in the top.

- Bulk packaging (e.g., railcars, trucks, trailers, etc.) must also be tightly sealed to prevent waste from leaking out or water from leaking in to the package. Packages containing unauthorized free liquids will be considered non-compliant.
- Bulk packaging must be clean. It must not have any waste material, or other material that could be mistaken for waste material, on the outer surface. Energy*Solutions* will perform contamination surveys on suspect areas of the package to ensure compliance with DOT regulations.
- Bottom dump railcars and end-dump trucks are not permitted unless approved in writing by Energy*Solutions*.
- Bulk packaging in intermodals, sealands, cargo containers, roll-offs, etc. must have ISO connectors on the top corners as illustrated in Figure 6-1 to allow the containers to be lifted from the top unless approved in writing by Energy*Solutions*.
- Friable asbestos is prohibited in bulk packages unless approved in writing by Energy*Solutions*.
- Each bulk container, which requires marking, will be properly marked in accordance with 49 CFR 172 Subpart D.
- Bulk packaging may not contain a mixture of bulk, unpackaged waste and manifested packaged waste (e.g., an intermodal containing loose unpackaged soil with manifested disposal containers within the same intermodal).
- Dimensions of gondola railcars must be between 48 to 65 feet in length and 8.5 to 12.5 feet in height as measured from the top of the rail to the top of the railcar unless approved in writing by Energy*Solutions*.
- Large 40 foot sealands must not contain bulk unpackaged waste unless approved in writing by Energy*Solutions*.

6.2.2 Non-Bulk Packaging (Disposal Containers)

Energy*Solutions* receives non-bulk packages (disposal containers) including boxes, drums, super sacks, etc. The disposal container is generally disposed of with the waste contents and will not be returned to the generator. Energy*Solutions* recommends drums are palletized to reduce the amount of time required to offload drum shipments. Palletized drums are also safer to manage at the disposal site. Generators may be charged extra for shipments containing non-palletized drums. Drums on one pallet must be from the same waste stream unless approved in writing by Energy*Solutions*. Contact Energy*Solutions* to request approval to ship non-palletized drums prior to shipment. Non-Bulk packaging must conform to the following requirements:

- Non-Bulk packaging must, at a minimum, meet the applicable requirements contained in 49 CFR 173.24, General Requirements for Packaging and Packages and in 49 CFR 173.410, General Design Requirements.
- Containers must be properly sealed to prevent load movement from “pumping” dust-laden air out of the container.
- Containers must be clean. They must not have any waste material, or other material, which could be mistake for waste material, on the outer surface. Energy*Solutions* will perform contamination surveys on suspect areas of the package to ensure compliance with DOT regulations.
- Containers in a shipment must be properly loaded and blocked and braced securely to prevent shifting and damage during transport. The specific transport loading requirements contained in 49 CFR 174 for rail and 49 CFR 177 for highway should be examined as well as 49 CFR 393 Subpart I, Protection Against Shifting and Falling Cargo.
- Although preferred, containerized rail shipments are not required to be enclosed or covered.
- Do not have unnecessary container closures; e.g., welding of drum rings or box lids.

- Non-bulk packages will not be returned to the generator.
- Non-bulk packages shall not exceed 7,500 lbs inside of an enclosed van trailer without prior written approval from Energy*Solutions*.
- Overpack containers only when necessary (e.g., to meet DOT requirements) for shipment.
- Energy*Solutions* prefers drums to be palletized to reduce the amount of time required to offload drum shipments. Palletized drums are also safer to manage at the disposal site. The pallets must be strong enough to withstand collapse during transit. The drums should be securely banded to the pallet.
- Truck or railcar beds used to transport containers must be free of all loose material, waste or otherwise.
- Each container that is required to be labeled will be properly labeled in accordance with the requirements of 49 CFR 172 Subpart E and UAC R313-15-1009.
- Each container that is required to be marked will be properly marked in accordance with the requirements of 49 CFR 172 Subpart D and/or 49 CFR 173.421 and Subpart 425.

Figure 6-1. Bulk Shipping Containers

6.3 HIGHWAY TRANSPORTATION

For highway shipments (Figure 6-2), the Energy*Solutions'* Clive facility is located just three miles south of Interstate 80 at the Clive Exit (Exit 49). Highway shipments should arrive for receipt and acceptance between 7:00 AM to 12:00 PM MST, Monday through Friday only. Shipments that arrive after 12:00 PM may not be accepted until the next day unless special handling arrangements have been previously approved.

Figure 6-2. Truck Highway Shipments

Shipments are generally unloaded on a first-come, first-served basis. Non-compliant shipments may result in unexpected delays. Shipments may take up to four hours to be checked in, inspected, surveyed, evaluated, and unloaded. Consequently, drivers should be informed that there are no eating facilities within the vicinity of the site.

6.4 RAIL TRANSPORTATION

Rail shipments (Figure 6-3) will be delivered to the Energy*Solutions*' rail siding by the Union Pacific railroad on a predetermined schedule. Once at Energy*Solutions*' siding, they will be moved into the disposal site by Energy*Solutions*' equipment.

Figure 6-3. Rail Shipments

Since the signed copies of the Uniformed Low-Level Radioactive Waste Manifest or Uniform Hazardous Waste Manifest forms do not travel with the railcars during transport, the original signed manifest must be

emailed to the Clive Disposal Facility or uploaded into the "Attachments" section of the Customer Portal for the specific shipment. The documents must be uploaded into the Customer Portal or be emailed to the Clive Disposal Facility a minimum of 3 working days prior to the receipt of the rail shipment.

6.5 RELEASE OF SHIPPING CONVEYANCES

The timeframe for the release of shipping conveyances (e.g., trucks, intermodal containers, railcars, etc.) is based on the specific contractual arrangements that have been established between each generator and Energy*Solutions*. Generators must request the type of radiological release prior to the shipment's arrival and must be allowed under the Terms and Conditions of the disposal agreement. The requested release types must be authorized by Energy*Solutions*' Business Development Department. Containers released to the Unrestricted Use criteria require significantly more time and expense due to the resources needed to meet these release criteria. Energy*Solutions* performs the following types of radiological releases as listed in the following table.

Energy*Solutions* Radiological Release Criteria

Release Type	Reference
Unrestricted Use	US NRC Regulatory Guide 1.86, June 1974 (Consistent with Energy*Solutions*' RML Condition 27)
Exclusive Use	49 CFR 173.443(c)
DOT Empty	49 CFR 173.428
Sole Use	49 CFR 173.443(d)

APPENDIX A

CONTACT INFORMATION

Energy*Solutions*

Corporate Office:	(801) 649-2000
Clive Security:	(801) 649-2175
Shipment Scheduling Email:	scheduling@energysolutions.com
Manifest Email:	manifest@energysolutions.com
EnergySolutions Website:	www.energysolutions.com
Online Customer Portal:	https://customerportal.energysolutions.com (accessible via the main Energy*Solutions* website)

State of Utah

Utah Department of Environmental Quality:	www.deq.utah.gov
Utah WMRDC Website:	www.wasteandradiation.utah.gov
Utah DWMRC – Generator Site Access Permit:	(801) 536-0233
Utah DWMRC – Generator Site Access Permit:	www.deq.utah.gov/Permits/radiation/gensiteaccess
Utah DWMRC Rules:	www.deq.utah.gov/Laws_Rules

United States Environmental Protection Agency
Solid Waste and Emergency Response (5305W)
EPA530-F-01-008
May 2001
www.epa.gov/osw

Office of Solid Waste

Environmental Fact Sheet

LOW-LEVEL MIXED WASTE CONDITIONALLY EXEMPT FROM HAZARDOUS WASTE REGULATION

The Environmental Protection Agency (EPA) is reducing regulatory burdens by exempting qualified mixed-waste generators from certain hazardous waste management requirements.

Background

Mixed waste is hazardous waste containing radioactive material. This waste is regulated by both the Resource Conservation and Recovery Act (RCRA) and the Atomic Energy Act. The Department of Energy or the Nuclear Regulatory Commission (NRC) regulate the radiological components of the waste.

Summary

EPA is providing increased flexibility to facilities for managing low-level mixed waste (LLMW) and naturally occurring and/or accelerator-produced radioactive material (NARM) containing hazardous waste. The Agency is exempting low-level mixed waste from RCRA storage and treatment requirements as long as the waste is generated under a single NRC license, meets the conditions specified, and is stored and treated in a tank or container. In addition, LLMW and NARM, which meet applicable treatment standards, may be conditionally exempt from RCRA transportation and disposal requirements. This waste may be disposed of at low-level radioactive waste disposal facilities which are licensed by NRC. The rule also provides additional flexibility for manifesting these wastes when they are destined for disposal at such facilities. Although mixed waste meeting the applicable conditions is exempt from certain RCRA requirements, it must still be managed as radioactive waste according to NRC regulations. Note that DOE disposal facilities are not eligible to accept the exempt waste since they are not subject to NRC regulation.

For More Information

The *Federal Register* notice, this fact sheet, and related documents are available on the Internet at <http://www.epa.gov/radiation/mixed-waste>. For additional information, or to order paper copies of any documents, call the RCRA Call Center. Callers within the Washington Metropolitan Area please dial 703-412-9810 or TDD

703-412-3323 (hearing impaired). Long-distance callers please call 1-800-424-9346 or TDD 1-800-553-7672. The RCRA Call Center operates weekdays, 9:00 a.m. to 5:00 p.m. Address written requests to: RCRA-Docket@epa.gov or RCRA Information Center (5305W), 1200 Pennsylvania Avenue, NW, Washington, DC 20460-0001.

DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MATERIALS MANAGEMENT DIVISION

HAZARDOUS WASTE MANAGEMENT

Filed with the secretary of state on July 27, 2020

These rules take effect 7 days after filing with the secretary of state

(By authority conferred on the director and the department of environment, great lakes, and energy by sections 11127, 11128, 11132a, and 11140 of the natural resources and environmental protection act, 1994 PA 451, MCL 324.11127, 324.11128, 324.11132a, and 324.11140, and Executive Reorganization Order Nos. 1995-16, 2009-31, and 2011-1, MCL 324.99903, 324.99919, and 324.99921)

R 299.9101, R 299.9102, R 299.9103, R 299.9104, R 299.9105, R 299.9106, R 299.9107, R 299.9108, R 299.9109, R 299.9202, R 299.9204, R 299.9206, R 299.9213, R 299.9214, R 299.9226, R 299.9228, R 299.9232, R 299.9301, R 299.9302, R 299.9303, R 299.9304, R 299.9305, R 299.9306, R 299.9307, R 299.9308, R 299.9309, R 299.9310, R 299.9311, R 299.9312, R 299.9313, R 299.9401, R 299.9404, R 299.9405, R 299.9409, R 299.9413, R 299.9503, R 299.9511, R 299.9513, R 299.9519, R 299.9601, R 299.9608, R 299.9610, R 299.9612, R 299.9627, R 299.9801, R 299.9803, R 299.9804, R 299.9808, R 299.9809, R 299.9902, R 299.11001, R 299.11003, R 299.11004, and R 299.11005 of the Michigan Administrative Code are amended, R 299.9314, R 299.9315, and R 299.9316 are added, and R 299.9205 is rescinded, as follows:

PART 1. GENERAL PROVISIONS

R 299.9101 Definitions; A, B.

Rule 101. As used in these rules:

(a) "Aboveground tank" means a device that meets the definition of "tank" in this part and that is situated so that the entire surface area of the tank is completely above the plane of the adjacent surrounding surface bottom and can be visually inspected.

(b) "Act" means the natural resources and environmental protection act, 1994 PA 451, MCL 324.101 to 324.90106.

(c) "Act 138" means the hazardous materials transportation act, 1998 PA 138, MCL 29.471 to 29.480.

(d) "Act 181" means the motor carrier safety act of 1963, 1963 PA 181, MCL 480.11 to 480.25.

(e) "Act 207" means the fire prevention code, 1941 PA 207, MCL 29.1 to 29.33.

(f) "Act 218" means sections 3101 and 3102 of the insurance code of 1956, 1956 PA 218, MCL 500.3101 and 500.3102.

(g) "Act 236" means the revised judicature act of 1961, 1961 PA 236, MCL 600.101 to 600.9947.

(h) "Act 300" means the Michigan vehicle code, 1949 PA 300, MCL 257.1 to 257.923.

(i) "Act 306" means the administrative procedures act of 1969, 1969 PA 306, MCL 24.201 to 24.328.

(j) "Act 368" means the public health code, 1978 PA 368, MCL 333.1101 to 333.25211.

(k) "Act 399" means the safe drinking water act, 1976 PA 399, MCL 325.1001 to 325.1023.

(l) "Active life" means the period from the initial receipt of hazardous waste at a facility until the director receives certification of final closure.

(m) "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 that is not a closed portion. (See also "closed portion" and "inactive portion.")

(n) "Active range" means a military range that is currently in service and being regularly used for range activities.

(o) "Acute hazardous waste" means hazardous waste that meets the listing criteria in R 299.9209(1) and is either listed in table 203a of the rules with the assigned hazard code of (H) or is listed in table 205a of the rules.

(p) "Administrator" means the administrator of the EPA or the administrator's designee.

(q) "Aerosol can" means a non-refillable receptacle containing a gas compressed, liquefied, or dissolved under pressure, the sole purpose of which is to expel a liquid, paste, or powder and fitted with a self-closing release device allowing the contents to be ejected by the gas.

(r) "Aerosol can processing" means the puncturing, draining, or crushing of aerosol cans.

(s) "AES filing compliance date" means the date that the EPA announces in the Federal Register, on or after which exporters of hazardous waste and exporters of CRTs for recycling are required to file EPA information in the Automated Export System or its successor system, under the International Trade Data System, ITDS, platform.

(t) "Agent," when used in conjunction with the term United States importer, means an employee of the United States importer or a legally recognized representative of the United States importer who has been authorized in a lawfully executed written document, such as a power of attorney, to act on the United States importer's behalf.

(u) "Agreement state" means a state that has entered into an agreement with the NRC under section 274(b) of the atomic energy act of 1954, 42 USC 2021, as amended, to assume responsibility for regulating within its borders byproduct, source, or special nuclear material in quantities not sufficient to form a critical mass.

(v) "Ampule" means an airtight vial made of glass, plastic, metal, or any combination of these materials.

(w) "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 storage or treatment tanks, between hazardous waste storage and treatment tanks to a point of disposal on site, or to a point of shipment for disposal off site.

(x) "Antifreeze" means a mixture containing ethylene glycol or propylene glycol for use as a heat transfer or dehydration fluid for the purposes of regulation as a universal waste under R 299.9228.

(y) "Aquifer" means a geologic formation, group of formations, or part of a formation that is capable of yielding a significant amount of groundwater to wells or springs.

(z) "Associated organic chemical manufacturing facility" means a facility that meets all of the following requirements:

(i) The primary SIC code at the facility is 2869 but operations may also include SIC codes 2821, 2822, and 2865.

(ii) The facility is physically co-located with a petroleum refinery.

(iii) The petroleum refinery to which the oil that is being recycled is returned also provides hydrocarbon feedstocks to the facility.

(aa) "ASTM" means the ASTM International.

(bb) "Authorized representative" means the person who is responsible for the overall operation of a facility or an operational unit, such as the plant manager, superintendent, or person who has equivalent responsibilities.

(cc) "Battery" means a device that consists of 1 or more electrically connected electrochemical cells and that is designed to receive, store, and deliver electric energy. An electrochemical cell is a system that consists of an anode, a cathode, an electrolyte, and any connections that are 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.

(dd) "Boiler" means an enclosed device that uses controlled flame combustion and that is either determined by the director to be a boiler based on the standards and procedures in 40 CFR 260.32 and 260.33, which are adopted by reference in R 299.11003, or that has all of the following characteristics:

(i) The unit has physical provisions for recovering and exporting thermal energy in the form of steam, heated fluids, or heated gases.

(ii) The unit's combustion chamber and primary energy recovery section or sections are of an integral design. To be of an integral design, the combustion chamber and the primary energy recovery section or sections, such as waterfalls and superheats, must be physically formed into 1 manufactured or assembled unit. A unit in which the combustion chamber and the primary energy recovery section or sections 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 an integral design:

(A) Process heaters or units that transfer energy directly to a process stream.

(B) Fluidized bed combustion units.

(iii) While in operation, the unit maintains a thermal energy recovery efficiency of not less than 60% calculated in terms of the recovered energy compared with the thermal value of the fuel.

(iv) The unit exports and utilizes not less than 75% of the recovered energy calculated on an annual basis. In this calculation, credit must not be given for recovered heat that is used internally in the same unit, such as for the preheating of fuel or combustion air and for the driving of induced or forced draft fans or feedwater pumps.

(ee) "Burner" means an owner or operator of a facility that burns either used oil fuel or hazardous waste fuel.

(ff) "By-product" means a material that is not 1 of the primary products of a production process and- that 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 coproduct that is produced for the general public's use and that is ordinarily used in the form in which it is produced by the process.

R 299.9102 Definitions; C, D.

Rule 102. As used in these rules:

(a) "Carbon regeneration unit" means an enclosed thermal treatment device used to regenerate spent activated carbon.

(b) "Carbon dioxide stream" means carbon dioxide that has been captured from an emission source such as a power plant, including 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.

(c) "Cathode ray tube" or "CRT" means a vacuum tube, composed primarily of glass, that is the visual or video display component of an electronic device. A used, intact CRT is 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.

(d) "Central accumulation area" means any onsite hazardous waste accumulation area that has

been designated for accumulating hazardous wastes in units subject to R 299.9306 or R 299.9307. Central accumulation area also includes an onsite hazardous waste accumulation area at an eligible academic entity that chooses to participate under R 299.9315 and is subject to 40 CFR 262.211 when accumulating unwanted material or hazardous waste.

(e) "CERCLA" means the comprehensive environmental response, compensation, and liability act of 1980, 42 USC 9601 to 9675.

(f) "Certification" means a statement of professional opinion based upon knowledge or belief.

(g) "Certified delivery" means certified mail with return receipt requested, or equivalent courier service or other means, that provides the sender with a receipt confirming delivery.

(h) "CFR" means the Code of Federal Regulations.

(i) "Chemical agents and munitions" means chemical agents and munitions as defined in 50 USC section 1521(j)(1).

(j) "Closed portion" means the portion of a facility that an owner or operator has closed pursuant to the approved facility closure plan and all applicable closure requirements. (See also "active portion" and "inactive portion.")

(k) "Combustion zone" means the portion of the internal capacity of an incinerator where the gas temperatures of the materials being burned are within 100 degrees Celsius of the specified operating temperature.

(l) "Commingling" means the transfer of hazardous wastes between containers or vehicles by a transporter during transportation that results in the waste being mixed or repackaged.

(m) "Component" means either the tank or the ancillary equipment of a tank system.

(n) "Condition for exemption" means any requirement in R 299.9304 to R 299.9307, R 299.9315, R 299.9316, or R 299.9503(1)(c) that states an event, action, or standard that must occur or be met to obtain an exemption from any applicable requirements under parts 5 to 8 of the rules, or from the requirement for notification under section 3010 of RCRA, 42 USC 6930.

(o) "Confined aquifer" means an aquifer that is bounded above and below by impermeable beds or by beds that have a distinctly lower permeability than that of the aquifer itself. It is an aquifer that contains confined groundwater.

(p) "Consignee" means the ultimate treatment, storage, or disposal facility in a receiving country to which the hazardous waste will be sent.

(q) "Consolidation" means the transfer of containers of hazardous wastes between transport vehicles by a transporter during transportation without the containers holding the wastes being opened and without the wastes being repackaged.

(r) "Constituent" or "hazardous waste constituent" means a constituent that caused the administrator to list the hazardous waste in 40 CFR part 261, subpart D, a constituent that is listed in table l of 40 CFR 261.24, or a constituent that is listed in table 202 or 205c of these rules.

(s) "Consumer electronics" means devices containing an electronic circuit board, liquid crystal display, or plasma display such as those commonly found in homes and offices and these devices when used in other settings.

(t) "Contained" as it relates to hazardous secondary materials that are legitimately recycled under R 299.9232, means held in a unit, including a land-based unit, that meets all of 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 materials, to prevent releases of the 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 releases through surface transport by precipitation runoff, releases to the soil and groundwater, wind-blown dust, fugitive air emissions, and catastrophic 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.

(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 part 6 of these rules are presumptively contained.

(u) "Container" means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

(v) "Contingency plan" means a document that sets 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 that could threaten human health or the environment.

(w) "Corrective action management unit" or "CAMU" means an area within a facility that is used only for managing remediation waste, in the case of grandfathered corrective action management units, or corrective action management unit-eligible waste, as further explained in R 299.9635(2) and (3), in implementing corrective action or cleanup at the facility.

(x) "Corrective action management unit-eligible waste" or "CAMU-eligible waste" means all wastes and hazardous wastes and all media, including groundwater, surface water, soils, sediments, and debris, that are managed for implementing cleanup. As-generated wastes from ongoing industrial operations at a site are not CAMU-eligible. Notwithstanding this subdivision and where appropriate, as-generated non-hazardous waste may be placed in a corrective action management unit if the waste is being used to facilitate treatment or the performance of the corrective action management unit. Wastes that would otherwise meet the definition of a CAMU-eligible waste are not CAMU-eligible wastes if either of the following apply:

(i) If the wastes are hazardous wastes found during a 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 the cleanup, or the containers or tanks are excavated during the cleanup.

(ii) If the director, or the director's designee, uses the authority in R 299.9635 to prohibit the wastes from management in a corrective action management unit.

(y) "Corrosion expert" means a person who, by reason of his or her 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. The person shall be certified as being qualified by the National Association of Corrosion Engineers 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.

(z) "CRT collector" means a person who receives used, intact CRTs for recycling, repair, resale, or donation.

(aa) "CRT exporter" means any person in the United States who initiates a transaction to send used CRTs outside the United States or its territories for recycling or reuse, or any intermediary in the United States arranging for the export.

(bb) "CRT glass manufacturer" means an operation or part of an operation that uses a furnace to manufacture CRT glass.

(cc) "CRT processing" means conducting all of the following activities:

(i) Receiving broken or intact CRTs.

(ii) Intentionally breaking intact CRTs or further breaking or separating broken CRTs.

(iii) Sorting or otherwise managing glass removed from CRT monitors.

(dd) "Designated facility" means a hazardous waste treatment, storage, or disposal facility that has received a permit or has interim status under 40 CFR parts 124 and 270; that has a license, permit,

or interim status from a state that is authorized under section 3006 of the solid waste disposal act of 1965, 42 USC 6926, which, if located in this state, has an operating license that is issued under part 111 of the act, MCL 324.11101 to 324.11153, has a legally binding agreement with the director that authorizes operation, or is subject to the requirements of section 11123(7) and (8) of the act, MCL 324.11123; or that is regulated under R 299.9206(1)(c) or R 299.9803; and that has been designated on the manifest by the generator under R 299.9309. If the waste is destined for a facility in an authorized state that has not yet obtained authorization to regulate the particular waste as hazardous, then the designated facility shall be a facility that is allowed by the receiving state to accept the waste. A designated facility may also mean a generator site designated on the manifest to receive its waste as a return shipment from a facility that has rejected the waste pursuant to R 299.9608.

(ee) "Destination facility" means a facility that treats, disposes of, or recycles a particular category of universal waste, except for the management activities described in 40 CFR 273.13(a) and (c) and 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.

(ff) "Dike" means an embankment or ridge that consists of either natural or man-made materials and- that is used to prevent the movement of liquids, sludges, solids, or other materials.

(gg) "Dioxins and furans (D/F)" means tetra, penta, hexa, hepta, and octa-chlorinated dibenzo dioxins and furans.

(hh) "Director" means the director of the department of environment, great lakes, and energy.

(ii) "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.

(jj) "Disposal" means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any hazardous waste into or on land or water in a manner that the hazardous waste or a constituent of the hazardous waste might enter the environment, be emitted into the air, or discharged into water, including groundwater.

(kk) "Disposal facility" means a facility or a part of a facility at which hazardous waste, as defined by these rules, is intentionally placed into or on any 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.

(ll) "Displacement" means the relative movement of any two sides of a fault measured in any direction.

(mm) "DOD" means the United States Department of Defense.

(nn) "DOE" means the United States Department of Energy.

(oo) "DOT" means the United States Department of Transportation.

(pp) "Do-it-yourselfer used oil collection center" means any site or facility that accepts or aggregates and stores used oil collected only from household do-it-yourselfers.

(qq) "Drip pad" means an engineered structure that consists of a curbed, free-draining base, which is constructed of nonearthen materials, and which is 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.

R 299.9103 Definitions; E, F.

Rule 103. As used in these rules:

(a) "Electronic import-export reporting compliance date" means the date that the EPA announces in the Federal Register, on or after which exporters, importers, and receiving facilities are required to submit certain export and import related documents to the EPA using the EPA's Waste Import Export Tracking System, or its successor system.

(b) "Electronic manifest" or "e-manifest" means the electronic format of the hazardous waste manifest that is obtained from the EPA's national e-manifest system and transmitted electronically to the system, and that is the legal equivalent of EPA Forms 8700-22 and 8700-22A.

(c) "Electronic manifest system" or "e-manifest system" means the 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.

(d) "Element" means any part of a unit or any group of parts of a unit that are assembled to perform a specific function, for example, a pump seal, pump, kiln liner, or kiln thermocouple.

(e) "Elementary neutralization unit" means a device that is following both of the following requirements:

(i) Is used for neutralizing wastes that are hazardous wastes only because they exhibit the corrosivity characteristic defined in R 299.9212 or are listed in R 299.9213 or R 299.9214 only because they exhibit the corrosivity characteristic.

(ii) Is in compliance with the definition of "tank," "tank system," "container," "transport vehicle," or "vessel" as specified in this part.

(f) "Eligible NARM waste" means NARM waste that is eligible for the transportation and disposal conditional exemption under R 299.9823 of the rules. It is a NARM waste that contains hazardous waste, meets the waste acceptance criteria of, and is allowed by state NARM regulations to be disposed of at a low-level radioactive waste disposal facility licensed under 10 CFR part 61 or NRC agreement state equivalent regulations.

(g) "Enforceable document" means an order, a plan, or other document issued by the department either in place of an operating license for the postclosure period, or as a source of alternative requirements for hazardous waste management units, as provided under these rules. An enforceable document may include, but is not limited to, a corrective action order under part 111 of the act, MCL 324.11101 to 324.111.53, a CERCLA remedy, or a closure or postclosure plan. An enforceable document must be issued under an authority that has available all of the following remedies:

(i) The authority to sue in courts of competent jurisdiction to enjoin any threatened or continuing violation of the requirements of these documents.

(ii) The authority to compel compliance with the requirements for corrective action or other emergency response measures deemed necessary to protect human health and the environment.

(iii) The authority to assess or sue to recover in court civil penalties, including fines, for violations of the requirements of these documents.

(h) "EPA" means the United States Environmental Protection Agency.

(i) "EPA acknowledgment of consent" or "EPA AOC" means the letter EPA sends to the exporter documenting the specific terms of the country of import's consent and the country or countries of transit's consent. The AOC meets the definition of an export license in the U.S. Census of Bureau regulations in 15 CFR 30.1.

(j) "EPA region" means the states and territories found in any of the 10 EPA regions identified in 40 CFR 260.10.

(k) "Episodic event" means an activity or activities, either planned or unplanned, that does not normally occur during generator operations and that results in an increase in the generation of hazardous wastes that exceeds the calendar month quantity limits for the generator's usual category.

(l) "Equivalent method" means any testing or analytical method that is approved by the director under R 299.9215.

(m) "Excluded scrap metal" means processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal.

(n) "Exempted radioactive waste" means a waste that meets the eligibility criteria and all of the conditions in R 299.9822, or meets the eligibility criteria and complies with all of the conditions in

R 299.9823. The waste is conditionally exempted from the regulatory definition of hazardous waste in R 299.9203.

(o) "Existing facility" means a treatment, storage, or disposal facility that either received all necessary state-issued environmental permits or licenses before January 1, 1980, or for which approval of construction was received from the air pollution control commission before November 19, 1980. Existing facilities also include those treatment, storage, or disposal facilities that were operating before January 1, 1980, under existing authority and that did not require state-issued environmental permits or licenses.

(p) "Existing portion" means the land surface area of an existing waste management unit previously authorized and included in the original part A permit application to the EPA on which wastes have been placed before the issuance of a permit under RCRA or an operating license under these rules, whichever is sooner.

(q) "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 before July 14, 1986. Installation has 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 of the following provisions applies:

(i) A continuous on-site physical construction or installation program has begun.

(ii) The owner or operator has entered into contractual obligations, which cannot be cancelled or modified without substantial loss, for physical construction of the site of installation of the tank system to be completed within a reasonable time.

(r) "Explosives or munitions emergency" means a situation involving the suspected or detected presence of unexploded ordnance, damaged or deteriorated explosives or munitions, an improvised explosive device, other potentially explosive material or device, or other potentially harmful military chemical munitions or device, that creates an actual or potential imminent threat to human health, including safety, or the environment, including property, as determined by an explosives or munitions emergency response specialist. Situations may require immediate and expeditious action by an explosives or munitions emergency specialist to control, mitigate, or eliminate the threat.

(s) "Explosives or munitions emergency response" means all immediate response activities by an explosives or munitions emergency response specialist to control, mitigate, or eliminate the actual or potential threat encountered during an explosives or munitions emergency. An explosives or munitions emergency response may include in-place render-safe procedures, treatment or destruction of the explosives or munitions or transporting those items to another location to be rendered safe, treated, or destroyed. Any reasonable delay in the completion of an explosives or munitions emergency response caused by a necessary, unforeseen, or uncontrollable circumstance does not terminate the explosives or munitions emergency. Explosives and munitions emergency responses may occur on either public or private lands and are not limited to responses at RCRA facilities.

(t) "Explosives or munitions emergency response specialist" means an individual trained in chemical or conventional munitions or explosives handling, transportation, render-safe procedures, or destruction techniques. Explosives or munitions emergency response specialists include DOD emergency explosive ordnance disposal, technical escort unit, and DOD-certified civilian or contractor personnel; and other federal, state, or local government or civilian personnel similarly trained in explosives or munitions emergency responses.

(u) "Exporter", also known as "primary exporter" on the manifest, means any person domiciled in the United States who is required to originate the movement document under R 299.9309 or the manifest for a shipment of hazardous waste under these rules, which specifies a foreign receiving facility to which the hazardous waste will be sent, or any recognized trader who proposes export of the hazardous waste for recovery or disposal operations in the country of import.

(v) "Facility" means 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 before reclamation. A facility may consist of several treatment, storage, or disposal operational units, such as 1 or more landfills or surface impoundments, or combinations of operational units. For the purpose of implementing corrective action under part 111 of the act, MCL 324.11101 to 324.11153, "facility" includes all contiguous property under the control of the owner or operator. Notwithstanding the definition of the term "facility" as it relates to corrective action, a remediation waste management site is not a facility that is subject to corrective action under R 299.9629, but is subject to the corrective action requirements of part 111 of the act, MCL 324.11101 to 324.11153, and these rules if the site is located within such a facility.

(w) "Facility mailing list" means the mailing list for a facility that is maintained by the department under 40 CFR 124.10(c)(1)(ix).

(x) "Fault" means a fracture along which rocks on 1 side have been displaced with respect to rocks on the other side.

(y) "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 United States Government Publishing Office.

(z) "Federal clean air act" means the clean air act, 42 USC 7401 to 7671q.

(aa) "Federal clean water act" means the federal water pollution control act, 33 USC 1251 to 1388.

(bb) "Federal hazardous materials transportation act" means the hazardous materials transportation authorization act of 1994, 49 USC 5101 to 5128.

(cc) "Federal resource conservation and recovery act" means the resource conservation and recovery act of 1976, 42 USC 6901 to 6992k.

(dd) "Federal safe drinking water act" means the safe drinking water act, 42 USC 300f to 300j-27.

(ee) "FIFRA" means the federal insecticide, fungicide, and rodenticide act, 7 USC 136 to 136y.

(ff) "Final closure" means the closure of all hazardous waste management units at the facility under all applicable closure requirements so that hazardous waste management activities under parts 5 and 6 of these rules are no longer conducted at the facility, unless the activities are subject to R 299.9305 to R 299.9307.

(gg) "Flood" means a flood that has a 1% chance of being equaled or exceeded in any given year.

(hh) "Floodplain" means any land area that is subject to a 1% or greater chance of flooding in any given year from any source.

(ii) "Food chain crops" means tobacco, crops grown for human consumption, and crops grown for feed for animals whose products are consumed by humans.

(jj) "Freeboard" means the vertical distance between the top of a tank or surface impoundment dike and the surface of the waste contained in the tank or surface impoundment dike.

(kk) "Free liquids" means liquids that readily separate from the solid portion of a waste at ambient temperature and pressure.

(ll) "Fugitive emissions" means air contaminant emissions that emanate from non-point emission sources or sources other than stacks, ducts, or vents.

(mm) "Functionally equivalent element" means an element that performs the same function or measurement and that meets or exceeds the performance specifications of another element.

R 299.9104 Definitions; G to I.

Rule 104. As used in these rules:

(a) "Generator" means any person, by site, whose act or process produces hazardous waste identified or listed in part 2 of these rules or whose act first causes a hazardous waste to become subject to regulation.

(b) "Geologist" means a person who, by reason of his or her knowledge of geology, mathematics,

and the physical and life sciences, acquired by education and experience, is equipped to practice geology.

(c) "Groundwater" means water below the land surface in a zone of saturation.

(d) "Hazardous secondary material" means a secondary material such as a spent material, by-product, or sludge that, when discarded, would be identified as hazardous waste under part 2 of these rules.

(e) "Hazardous secondary material generator" means a person whose act or process produces hazardous secondary materials at the generating facility. For the purpose of this definition, a generating facility includes all contiguous property owned, leased, or otherwise controlled by the hazardous secondary material generator.

(f) "Hazardous waste" means a hazardous waste as defined in R 299.9203.

(g) "Hazardous waste fuel" means hazardous waste burned for energy recovery in any boiler or industrial furnace that is not regulated as an incinerator or fuel produced from hazardous waste for this purpose by processing, blending, or other treatment.

(h) "Hazardous waste management unit" means a contiguous area of land on or in which hazardous waste is placed or is the largest area in which there is a significant likelihood of mixing hazardous waste constituents in the same area. Examples of hazardous waste management units include all of the following:

(i) A surface impoundment.

(ii) A waste pile.

(iii) A land treatment area.

(iv) A landfill cell.

(v) An incinerator.

(vi) A tank and its associated piping and underlying containment system.

(vii) 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.

(viii) A miscellaneous unit.

(i) "Hazardous waste number" means the code number that is used to identify a particular type of hazardous waste.

(j) "Holocene" means the most recent epoch of the quaternary period extending from the end of the Pleistocene to the present.

(k) "Home scrap metal means scrap metal as generated by steel mills, foundries, and refineries such as turnings, cuttings, punchings, and borings.

(l) "Household do-it-yourselfer used oil" means oil that is derived from households, such as used oil generated by individuals through the maintenance of their personal vehicles.

(m) "Household do-it-yourselfer used oil generator" means an individual who generates household do-it-yourselfer used oil.

(n) "Import" means the act of bringing hazardous waste into the United States from a foreign country.

(o) "Inactive portion" means that portion of a facility that is not operated after November 19, 1980. (See also "active portion" and "closed portion.")

(p) "Inactive range" means a military range that is not currently being used, but that is still under military control and considered by the military to be a potential range area, and that has not been put to a new use that is incompatible with range activities.

(q) "Incinerator" means an enclosed device that satisfies either of the following criteria:

(i) Uses controlled flame combustion, does not meet the criteria for classification as a boiler, sludge dryer, or carbon regeneration unit, and is not listed as an industrial furnace.

(ii) Meets the definition of an infrared incinerator or plasma arc incinerator.

(r) "Incompatible waste" means a hazardous waste that is unsuitable for either of the following:

(i) Placement in a particular device or facility because it may cause the corrosion or decay of containment materials, for example, container inner liners or tank walls.

(ii) Commingling with another waste or material under uncontrolled conditions because the commingling might produce heat or pressure; fire or explosion; a violent reaction; toxic dusts, mists, fumes, or gases; or flammable fumes or gases. Examples of incompatible wastes are described in 40 CFR part 264, appendix V, and part 265, appendix V.

(s) "Independent requirement" means a requirement in part 3 of the rules that states an event, action, or standard that must occur or be met, and that applies without relation to, or irrespective of, the purpose of obtaining a conditional exemption from the operating license, interim status, and operating standards under R 299.9304 to R 299.9307, R 299.9315, or R 299.9316.

(t) "Individual generation site" means the contiguous site at or on which 1 or more hazardous wastes are generated. An individual generation site, such as a large manufacturing plant, may have 1 or more sources of hazardous waste, but is considered a single or individual generation site if the site or property is contiguous.

(u) "Industrial furnace" means any of the following enclosed devices that are integral components of manufacturing processes and that use thermal treatment to accomplish the 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 machines, roasters, and foundry furnaces.

(viii) Titanium dioxide chloride process oxidation reactors.

(ix) Methane reforming furnaces.

(x) Pulping liquor recovery furnaces.

(xi) Combustion devices that are used in the recovery of sulfur values from spent sulfuric acid.

(xii) Halogen acid furnaces 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 a fuel, hazardous waste fed to the furnace has a minimum halogen content of 20% as-generated.

(xiii) Other devices that the administrator may, after notice and comment, add to this subdivision on the basis of 1 or more of the following factors:

(A) The design and use of the device primarily to accomplish the 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.

(F) Other factors, as appropriate.

(v) "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 that is not listed as an industrial furnace.

(w) "In-ground tank" means a device that satisfies the definition of "tank" specified in R 299.9108(a) and that has a portion of its wall situated, to any degree, within the ground, thereby

preventing visual inspection of the external surface area of the device that is in the ground.
(x) "Injection well" means a well into which fluids are injected. (See also "underground injection.")
(y) "Inner liner" means a continuous layer of material that is placed inside a tank or container and that protects the construction materials of the tank or container from the contained waste or reagents used to treat the waste.
(z) "In operation" means that a facility is treating, storing, or disposing of hazardous waste.
(aa) "Installation inspector" means a person who, by reason of his or her 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
(bb) "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 the material.
(cc) "International shipment" means the transportation of hazardous waste into or out of the jurisdiction of the United States.

R 299.9105 Definitions; L to N.
Rule 105. As used in these rules:
(a) "Lamp" means the bulb or tube portion of a lighting device specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infrared regions of the electromagnetic spectrum. Examples of common lamps include incandescent, fluorescent, high intensity discharge, sodium vapor, mercury vapor, and neon lamps.
(b) "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.
(c) "Land disposal" means placement in or on the land and includes, but is not limited to, placement in any of the following:
(i) A landfill.
(ii) A surface impoundment.
(iii) A waste pile.
(iv) An injection well.
(v) A land treatment facility.
(vi) A salt dome formation.
(vii) A salt bed formation.
(viii) An underground mine or cave.
(ix) A concrete vault or bunker intended for disposal purposes.
"Land disposal" also means placement in or on the land by means of open detonation and open burning where the residues continue to exhibit 1 or more of the characteristics of hazardous waste. "Land disposal" does not include ocean disposal.
(d) "Land disposal restriction treatment standards" means the treatment standards under 40 CFR part 268 that a hazardous waste must meet.
(e) "Landfill" means a disposal facility or part of a facility where hazardous waste is placed in or on land. "Landfill" does not include any of the following:
(i) A pile.
(ii) A land treatment facility.
(iii) A surface impoundment.
(iv) An underground injection well.
(v) A salt dome formation.
(vi) A salt bed formation.
(vii) An underground mine or cave.
(viii) A corrective action management unit.

(f) "Landfill cell" means a discrete volume of a hazardous waste landfill that uses a liner to provide isolation of wastes from adjacent cells or wastes. Examples of landfill cells are trenches and pits.

(g) "Land treatment facility" means a treatment facility or part of a treatment facility at which hazardous waste is applied onto or incorporated into the soil surface. The facilities are disposal facilities if the waste will remain after closure.

(h) "Large quantity generator" means a generator who generates any of the following amounts in a calendar month:

(i) Greater than or equal to 1000 kilograms of non-acute hazardous waste.

(ii) Greater than 1 kilogram of acute hazardous waste.

(iii) Greater than 1 kilogram of severely toxic hazardous waste.

(iv) Greater than 100 kilograms of 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 acute hazardous waste or severely toxic hazardous waste.

(i) "Leachate" means any liquid, including any suspended components in the liquid, that has percolated through or drained from hazardous waste.

(j) "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. The system must employ operational controls, such as daily visual inspections for releases into the secondary containment system or aboveground tanks, or consist of an interstitial monitoring device designed to continuously and automatically detect the failure of the primary or secondary containment structure or the presence of a release of hazardous waste into the secondary containment structure.

(k) "Lift" means a layer of placed materials, including a layer of compacted clay in a landfill liner or cap, or a layer of waste in a landfill.

(l) "Liner" means a continuous layer of natural or man-made materials beneath or on the sides of a surface impoundment, landfill, or landfill cell that restricts the downward or lateral escape of hazardous waste, hazardous waste constituents, or leachate.

(m) "Low-level mixed waste" or "LLMW" means a waste that contains both LLRW and hazardous waste.

(n) "Low-level radioactive waste" or "LLRW" means a radioactive waste that contains source, special nuclear, or byproduct materials, and that is not classified high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct materials as defined in section 11(e)(2) of the atomic energy act of 1954, 42 USC 2014(e)(2).

(o) "Management" or "hazardous waste management" means the systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery, and disposal of hazardous waste.

(p) "Manifest" means the shipping document EPA Form 8700-22, including, if necessary, EPA Form 8700-22A, or the electronic manifest, in accordance with the applicable requirements of parts 3, 4, and 6 of these rules.

(q) "Manifest tracking number" means the alphanumeric identification number which is preprinted in item 4 of the manifest by a registered source.

(r) "Method of treatment or disposal" means 1 of the major categories of treatment or disposal used for hazardous waste, including any of the following:

(i) Landfill.

(ii) Land treatment.

(iii) Thermal treatment.

(iv) Chemical treatment.

(v) Physical treatment.

(vi) Biological treatment.

(s) "Military" means the DOD, the United States Armed Services, Coast Guard, National Guard, DOE, or other parties under contract or acting as agent for any of the parties, who handle military munitions.

(t) "Military munitions" means all ammunition products and components produced or used by or for the DOD or the United States Armed Services for national defense and security, including military munitions under the control of the DOD, the United States Coast Guard, the DOE, and National Guard personnel. The term military munitions includes any of the following: confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries used by DOD components, including bulk explosives and chemical warfare agents, chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunitions, small arms ammunitions, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolitions charges, and devices and components thereof. Military munitions do not include wholly inert items, improvised explosive devices, and nuclear weapons, nuclear devices, and nuclear components thereof. However, the term military munitions does include nonnuclear components of nuclear devices, managed under the DOE's nuclear weapons program after all required sanitization operations under the atomic energy act of 1954, 42 USC 2011 to 2296b-7, as amended, have been compiled.

(u) "Military range" means designated land and water areas set aside, managed, and used to conduct research on, develop, test, and evaluate military munitions and explosives, other ordnance, or weapon systems, or to train military personnel in their use and handling. Ranges include firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, and buffer zones with restricted access and exclusionary areas.

(v) "Mining overburden returned to the mine site" means any material overlying an economic mineral deposit that is removed to gain access to the deposit and is then used for reclamation of a surface mine.

(w) "Miscellaneous unit" means a hazardous waste management unit where hazardous waste is treated, stored, or disposed of. "Miscellaneous unit" does not include any of the following:

(i) A container.

(ii) A tank.

(iii) A surface impoundment.

(iv) A pile.

(v) A land treatment unit.

(vi) A landfill.

(vii) An incinerator.

(viii) A boiler.

(ix) An industrial furnace.

(x) An underground injection well with appropriate technical standards pursuant to 40 CFR part 146.

(xi) A unit that is eligible for a temporary operating license for research under R 299.9501.

(xii) A corrective action management unit.

(xiii) A staging pile.

(x) "Movement" means that hazardous waste transported to a facility in an individual vehicle.

(y) "Mixed waste" means a waste that contains both hazardous waste and source, special nuclear, or byproduct material subject to the atomic energy act of 1954, 42 USC 2011 to 2296b-7, as amended.

(z) "Naturally occurring and/or accelerator-produced radioactive material" or "NARM" means radioactive material that is regulated by a state under state law, or by the DOE, as authorized by the atomic energy act of 1954, 42 USC 2011 to 2296b-7, as amended, under DOE orders, and meets

either of the following requirements:
(i) Is radioactive material that is naturally occurring and is not source, special nuclear, or byproduct material as defined by the atomic energy act of 1954, 42 USC 2011 to 2296b-7, as amended.
(ii) Is radioactive material that is produced by an accelerator.
(aa) "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. For purposes of 40 CFR 264.193(g)(2) and 265.193(g)(2), a new tank system is one for which construction commences after July 14, 1986.
(bb) "NFPA" means the National Fire Protection Association.
(cc) "No free liquids" as used in R 299.9204, means that solvent-contaminated wipes may not contain free liquids as determined by Method 9095B, the Paint Filter Liquids Test, included in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA publication SW-846 or by another standard or test method approved by the director, and that there is no free liquid in the container holding the wipes.
(dd) "Non-acute hazardous waste" means all hazardous waste that are not acute hazardous waste or severely toxic hazardous waste as defined in these rules.
(ee) "NRC" means the United States Nuclear Regulatory Commission.
(ff) "NRC license" or "NRC agreement state license" means a license issued by the NRC, or NRC agreement state, to users that manage radionuclides regulated by the NRC, or NRC agreement states, under the authority of the atomic energy act of 1954, 42 USC 2011 to 2296b-7, as amended.

R 299.9106 Definitions; O to Q.
Rule 106. As used in these rules:
(a) "On-ground tank" means a device that satisfies the definition of "tank" in R 299.9108(a) 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.
(b) "On-site" means on the same or geographically contiguous property, which may be divided by a public or private right-of-way if the entrance and exit between the pieces of property are at a crossroads intersection and access is by crossing, rather than going along, the right-of-way. Noncontiguous pieces of property owned by the same person but connected by a right of way that the owner controls and that the public does not have access is also considered on-site property.
(c) "On-site treatment facility" means a facility that is for the treatment of hazardous waste in tanks or containers, that is located on the site of generation of the wastes, and that does not do either of the following:
(i) Include equipment for incineration.
(ii) Accept hazardous wastes from other generators.
(d) "Open burning" means the combustion of any material without any of 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.
(iii) Control of the emission of the gaseous combustion products. (See also "incineration" and "thermal treatment.")
(e) "Operating license" means a license to construct a new facility or expand, enlarge, or alter an existing facility, or to operate a facility pursuant to the authority of part 111 of the act, MCL 324.11101 to 324.11153.
(f) "Operator" means the person responsible for the overall operation of a facility.
(g) "Owner" means the person who owns a treatment, storage, or disposal facility, or part of a

facility, including the titleholder of the land on which the facility is located.

(h) "Partial closure" means the closure of a hazardous waste management unit pursuant to the applicable closure requirements of 40 CFR part 265 and part 6 of these rules 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, a landfill cell, surface impoundment, waste pile, or other hazardous waste management units while other units of the same facility continue to operate.

(i) "Person" means any of the following entities:

(i) An individual.

(ii) A partnership.

(iii) The state.

(iv) A trust.

(v) A firm.

(vi) A joint stock company.

(vii) A federal agency.

(viii) A corporation, including a government corporation.

(ix) An association.

(x) A municipality

(xi) A commission.

(xii) A political subdivision of a state.

(xiii) Any interstate body.

(xiv) Any other public body created by or under state law.

(j) "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 might result in noncompliance with part 111 of the act, MCL 324.11101 to 324.11153, or these rules.

(k) "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 meets any of the following criteria:

(i) Is a new animal drug under section 201(v) of the federal food, drug, and cosmetic act, 21 USC 321(v).

(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.

(iii) Is an animal feed under section 201(w) of the federal food, drug, and cosmetic act, 21 USC 321(w), that bears or contains any substances identified in paragraph (i) or (ii) of this subdivision.

(l) "Petrochemical recovered oil" means oil that has been reclaimed from secondary materials from normal organic chemical manufacturing processes and oil recovered from organic chemical manufacturing processes.

(m) "Petroleum refining facility" means an establishment that is primarily engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, and lubricants through fractionation, straight distillation of crude oil, redistillation of unfinished petroleum derivatives, cracking, or other processes.

(n) "Pharmaceutical" means a drug intended for use in the diagnosis, cure, mitigation, treatment, therapy, or prevention of disease in humans or animals.

(o) "Pile" means any noncontainerized accumulation of solid, nonflowing hazardous waste that is used for treatment or storage.

(p) "Planned episodic event" means an episodic event that the generator planned and prepared for, including regular maintenance, tank cleanouts, short-term projects, and removal of excess chemical inventory.

(q) "Plasma arc incinerator" means any enclosed device which uses 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.

(r) "Point source" means any discernible, confined, and discrete conveyance, including any of the following from which pollutants are or might be discharged:

(i) A pipe.
(ii) A ditch.
(iii) A channel.
(iv) A tunnel.
(v) A conduit.
(vi) A well.
(vii) A discrete fissure.
(viii) A container.
(ix) Rolling stock.
(x) A concentrated animal feeding operation.
(xi) A vessel or other floating craft.

"Point source" does not include return flows from irrigated agriculture.

(s) "Primary monitoring parameter" means indicator parameters, for example, specific conductance, total organic carbon, or total organic halogen; hazardous waste constituents; or reaction products which provide a reliable indication of the presence of hazardous constituents in groundwater and which, when specified in a facility operating license, are subject to all of the requirements of 40 CFR part 264, subpart F.

(t) "Processed scrap metal" means 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 and fines, drosses, and related materials which have been agglomerated. Shredded circuit boards being sent for recycling are not considered processed scrap and are covered under the exclusion from the definition of waste for shredded circuit boards that are being recycled in R 299.9204.

(u) "Processing" means chemical or physical operations designed to produce from used oil, or to make used oil more amenable for production of, fuel oils, lubricants, or other used oil-derived products. Processing includes all of the following:

(i) Blending used oil with virgin petroleum products.
(ii) Blending used oils to meet fuel specifications.
(iii) Filtration.
(iv) Simple distillation.
(v) Chemical or physical separation.
(vi) Re-refining.

(v) "Prompt scrap metal" means scrap metal as generated by the metal working and fabrication industries. Prompt scrap metal, which is also known as "industrial" or "new" scrap metal, includes all of the following:

(i) Turnings.
(ii) Cuttings.
(iii) Punching.
(iv) Borings.

(w) "Publicly owned treatment works", known as "POTW," means any device or system which is used in the treatment, including recycling and reclamation, of municipal sewage or industrial wastes of a liquid nature and which is owned by a "state" or "municipality," as defined by section 502(4) of the federal clean water act, 33 USC 1362(4). This definition includes sewers, pipes, or other

conveyances only if they convey wastewater to a POTW providing treatment.

(x) "Qualified groundwater 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 groundwater hydrology and related fields as may be demonstrated by state registration, professional certifications, or completions of accredited university courses that enable that individual to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport.

R 299.9107 Definitions; R, S.

Rule 107. As used in these rules:

(a) "RCRA" means the solid waste disposal act, as amended by the resource conservation and recovery act of 1976, as amended, 42 USC 6901 to 6992k.

(b) "Reclamation" means either processing to recover a usable product or regeneration, such as in the recovery of lead values from spent batteries and the regeneration of spent solvents. For the purpose of R 299.9204(1)(aa) and (bb), 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 of 40 CFR 266.100(d)(1)-(3), and if the residuals meet the requirements of R 299.9808.

(c) "Recognized trader" means a person domiciled in the United States, by site of business, who acts to arrange and facilitate transboundary movements of wastes destined for recovery or disposal operations, either by purchasing from and subsequently selling to United States and foreign facilities, or by acting under arrangements with a United States waste facility to arrange for the export or import of the wastes.

(d) "Recreational property" means all lands that are predominately intended to provide outdoor recreational activities under the control and operation of a governmental agency, such as outdoor parks, preserves, campgrounds, and wildlife refuges.

(e) "Recycle" means use, reuse, or reclamation. Material is used or reused if it is either of the following:

(i) Employed as an ingredient in an industrial process to make a product, unless distinct components of the material are recovered as separate end products, such as when metals are recovered from metal-containing secondary materials.

(ii) Employed in a particular function or application as an effective substitute for a commercial product, such as spent pickle liquor used as phosphorus precipitant and sludge conditioner in wastewater treatment.

(f) "Recyclable material" means hazardous waste that is recycled.

(g) "Re-refining distillation bottoms" means the heavy fraction produced by vacuum distillation of filtered and dehydrated used oil. The composition of still bottoms varies with column operation and feedstock.

(h) "Regional administrator" means the regional administrator or his or her designee for the EPA region in which the facility is located.

(i) "Regulated unit" means a surface impoundment, waste pile, land treatment unit, or landfill that received hazardous waste after July 26, 1982.

(j) "Remanufacturing" means processing higher-value secondary material 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.

(k) "Remedial action plan" or "RAP" means a special form of an operating license that a facility owner or operator may obtain instead of an operating license issued under part 5 of these rules. The

RAP shall authorize the treatment, storage, or disposal of hazardous remediation waste at a remediation waste management site.

(l) "Remediation waste" means all wastes and hazardous wastes, and all media, including groundwater, surface water, soils, and sediments, and debris, that are managed for implementing cleanup.

(m) "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 R 299.9629, but is subject to the corrective action requirements of part 111 of the act, MCL 324.11101 to 324.11153, and these rules if the site is located in such a facility.

(n) "Representative sample" means a sample of a universe or whole that can be expected to exhibit the average properties of the universe or whole.

(o) "Retention time" means the minimum time hazardous waste is subjected continuously to a required combustion zone temperature in an incinerator.

(p) "Run-off" means any rainwater, leachate, or other liquid that drains over land from any part of a facility.

(q) "Run-on" means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.

(r) "Saturated zone" or "zone of saturation" means that part of the earth's crust in which all voids are filled with water.

(s) "Scrap metal" means bits and pieces of metal parts, such as bars, turnings, rods, sheets, wire, or metal pieces, that may be combined together with bolts or by soldering, such as radiators, scrap automobiles, and railroad car boxes, and that, when worn or superfluous, may be recycled.

(t) "Secondary monitoring parameter" means ions such as calcium, sodium, magnesium, iron, chloride, sulfate, bicarbonate, and carbonate; waste constituents; reaction products; or other parameters that provide an indication of the presence of hazardous constituents in groundwater and which are not subject to the requirements of 40 CFR part 264, subpart F.

(u) "Severely toxic hazardous waste" means a waste that exhibits the characteristic of severe toxicity by containing 1 part per million or more of a severely toxic substance listed in table 202 of these rules.

(v) "Sham recycling" means recycling that is not legitimate recycling as outlined in R 299.9232. A hazardous secondary material found to be sham recycled is considered discarded and a waste.

(w) "Site identification number" means the number that is assigned by the EPA or the EPA's designee to each generator, transporter, and treatment, storage, or disposal facility. If a generator, transporter, or treatment, storage, or disposal facility manages wastes that are hazardous under these rules, but are not hazardous under RCRA, then "site identification number" means an equivalent number that is assigned by the director.

(x) "Sludge" means any solid, semisolid, 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.

(y) "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 per pound of sludge treated on a wet-weight basis.

(z) "Small quantity generator" means a generator who generates the following amounts in a calendar month:

(i) Greater than 100 kilograms but less than 1,000 kilograms of non-acute hazardous waste.

(ii) Less than or equal to 1 kilogram of acute hazardous waste.

(iii) Less than or equal to 1 kilogram of severely toxic hazardous waste.

(iv) Less than or equal to 100 kilograms of 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 acute hazardous waste or severely toxic hazardous waste.

(aa) "Sole source aquifer" means an aquifer designated pursuant to section 1424(e) of the federal safe drinking water act, 42 USC 300h-3(e).

(bb) "Solvent-contaminated wipe" means a wipe that, after use or after cleanup of a spill, meets any of the following criteria:

(i) Contains 1 or more of the F001 through F005 solvents listed in R 299.9220 or the corresponding P- or U-listed solvents found in R 299.9224, R 299.9225, or R 299.9226.

(ii) Exhibits a hazardous characteristic as defined in R 299.9212 and that characteristic results from a solvent listed in part 2 of these rules.

(iii) Exhibits only the hazardous characteristic of ignitability as defined in R 299.9212 due to the presence of 1 or more solvents that are not listed in part 2 of these rules.

Solvent-contaminated wipes that contain listed hazardous wastes other than solvents, or exhibit the characteristic of toxicity, corrosivity, or reactivity due to contaminants other than solvents, are not eligible for the exclusions in R 299.9204(1)(z) and (2)(q).

(cc) "Sorb" means to adsorb or absorb, or both.

(dd) "Sorbent" means a material that is used to soak up free liquids by either adsorption or absorption, or both.

(ee) "Speculative accumulation" means accumulation before recycle. A material is not accumulated speculatively if the person accumulating the material shows that all of the following requirements are met:

(i) That the material is potentially recyclable and has a feasible means of being recycled.

(ii) 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 not less than 75% by weight or volume of the amount of that material accumulated at the beginning of the period. In calculating the percentage of turnover, the 75% requirement is to be applied to each material of the same type that is recycled in the same way. Materials accumulating in units which would be exempt from regulation under R 299.9204(3)(a) or which are already defined as wastes shall not be included in making the calculation. Materials are no longer in this category once they are removed from accumulation for recycling.

(iii) For hazardous secondary materials being to be recycled under R 299.9232, R 299.9233, or R 299.9234, the material is 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.

(ff) "Spent material" means 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.

(gg) "Staging pile" means an accumulation of solid, non-flowing remediation waste that is not a containment building and that is used only during remedial operations for temporary storage at a facility. Staging piles must be designated by the director under R 299.9638.

(hh) "State" means any of the following:

(i) The several states.

(ii) The District of Columbia.

(iii) The Commonwealth of Puerto Rico.

(iv) The Virgin Islands.

(v) Guam.

(vi) American Samoa.

(vii) The Commonwealth of the Northern Mariana Islands.

(ii) "Storage" means the holding of hazardous waste for a temporary period at the end of which the hazardous waste is treated, disposed of, or stored elsewhere.

(jj) "Sump" means any pit or reservoir which satisfies the definition of "tank" in R 299.9108 and those troughs or trenches connected to it that serve to collect hazardous waste for transport to hazardous waste storage, treatment, or disposal facilities. When used in conjunction with the regulation of a landfill, surface impoundment, and waste pile, a 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 later removal from the system.

(kk) "Surface impoundment" or "impoundment" means a treatment, storage, or disposal facility or part of a treatment, storage, or disposal facility that 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, that is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and that is not an injection well. Examples of surface impoundments are holding, storage, settling and aeration pits, ponds, and lagoons.

(ll) "Surface water" means a body of water whose top surface is exposed to the atmosphere and includes the Great Lakes, their connecting waters, all inland lakes and ponds, rivers and streams, impoundments, open drains, and other watercourses, except for drainage ways and ponds used solely for wastewater conveyance, treatment, or control.

R 299.9108 Definitions; T.

Rule 108. As used in these rules:

(a) "Tank" means a stationary device that is designed to contain an accumulation of hazardous waste and that is constructed primarily of nonearthen materials, such as wood, concrete, steel, or plastic, that provide structural support.

(b) "Tank system" means a hazardous waste storage or treatment tank and its associated ancillary equipment and containment system.

(c) "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.

(d) "Thermal treatment" means the treatment of hazardous waste in a device that uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the hazardous waste. All of the following are examples of thermal treatment processes:

(i) Incineration.

(ii) Molten salt.

(iii) Pyrolysis.

(iv) Calcination.

(v) Wet air oxidation.

(vi) Microwave discharge.

(e) "Thermostat" means a temperature control device that contains metallic mercury in an ampule attached to a bimetal sensing element and includes mercury-containing ampules that have been removed from the temperature control devices in compliance with the requirements of 40 CFR 273.13(c)(2) or 273.33(c)(2).

(f) "Title II of the solid waste disposal act" means the sections of Public Law 89-272 specified in the act.

(g) "Totally enclosed treatment facility" means a facility for the treatment of hazardous waste that is directly connected to an industrial production process and that is constructed and operated in a manner that prevents the release of any hazardous waste or any constituent of a hazardous waste into the environment during treatment. An example is a pipe in which waste acid is neutralized.

(h) "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.

(i) "Transportation" means the movement of hazardous waste by air, rail, highway, or water.

(j) "Transport vehicle" means a motor vehicle or railcar that is used for the transportation of cargo by any mode. Each cargo-carrying body, such as a trailer or railroad freight car, is a separate transport vehicle.

(k) "Transporter" means a person who is engaged in the off-site transportation of hazardous waste by air, rail, highway, or water.

(l) "Treatability study" means a study in which a hazardous waste is subjected to a treatment process to determine any of the following:

(i) Whether the waste is amenable to the treatment process.

(ii) What pretreatment, if any, is required.

(iii) The optimal process conditions needed to achieve the desired treatment.

(iv) The efficiency of a treatment process for a specific waste or wastes.

(v) The characteristics and volumes of residuals from a particular treatment process. Also included in this definition for the purposes of the exemptions specified in R 299.9204(7), (8), and (9) are liner compatibility, corrosion, and other material compatibility studies and toxicological and health effects studies. A treatability study is not a means to commercially treat or dispose of hazardous waste.

(m) "Treatment" means any method, technique, or process, including neutralization, that is designed to change the physical, chemical, or biological character or composition of any hazardous waste to neutralize the waste, to recover energy or material resources from the waste, or to render the waste nonhazardous or less hazardous, safer to transport, store, or dispose of, amenable to recovery or storage, or reduced in volume. Treatment includes any activity in processing that is designed to change the physical form or chemical composition of hazardous waste to render it nonhazardous.

(n) "Treatment facility" means a facility or part of a facility at which hazardous waste, as defined by these rules, is subject to treatment.

(o) "Treatment zone" means a soil area of the unsaturated zone of a land treatment unit within which hazardous constituents are degraded, transformed, or immobilized.

(p) "Trial burn" means a test that is conducted under the requirements of an operating license to determine if the design of an incinerator or other thermal treatment device is satisfactory.

(q) "Trial operation" means an incinerator test that is conducted under the requirements of an operating license to determine if the operation of the incinerator or other thermal treatment device is satisfactory.

R 299.9109 Definitions; U to Z.

Rule 109. As used in these rules:

(a) "Underground injection" or "well 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.

(b) "Underground tank" means a device that satisfies the definition of "tank" specified in R 299.9108 and that has its entire surface area below the surface of, and covered by, the ground.

(c) "Unexploded ordnance" means military munitions that have been primed, fused, armed, or otherwise prepared for action, and have been fired, dropped, launched, projected, or placed in such a manner that constitutes a hazard to operations, installation, personnel, or material and remain unexploded either by malfunction, design, or any other cause.

(d) "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.

(e) "United States" means any of the following:

(i) The 50 states.
(ii) The District of Columbia.
(iii) The Commonwealth of Puerto Rico.
(iv) The United States Virgin Islands.
(v) Guam.
(vi) American Samoa.
(vii) The Commonwealth of the Northern Mariana Islands.

(f) "United States importer" means a person who has lawfully recognized resident status within the United States and who brings in, or arranges for the entry of, a shipment of hazardous waste into the United States from a foreign country. A United States importer may be any of the following persons:

(i) The person who is liable for primary payment of any United States customs duties on the hazardous waste.
(ii) An agent as defined in R 299.9101.
(iii) The treatment, storage, or disposal facility designated on the manifest.
(iv) The importer of record as designated on the United States customs entry documents.
(v) The transporter who carries the hazardous waste at the point of entry.
(vi) The consignee.

(g) "Universal waste" means any of the hazardous wastes that are identified in R 299.9228(1) and managed under R 299.9228.

(h) "Universal waste handler" means a generator of universal waste or 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, a destination facility, or a foreign destination. The term universal waste handler does not include either of the following:

(i) A person who treats, disposes of, or recycles universal waste, except as provided for in 40 CFR 273.13(a), (c), or (e) or 273.33(a), (c), or (e).
(ii) A person engaged in the off-site transportation of universal waste by air, rail, highway, or water, including a universal waste transfer facility.

(i) "Universal waste large quantity handler" means a universal waste handler who accumulates 5,000 kilograms or more total of universal waste at any time.

(j) "Universal waste small quantity handler" means a universal waste handler who does not accumulate 5,000 kilograms or more total of universal waste at any time.

(k) "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 10 days or less.

(l) "Universal waste transporter" means a person engaged in the off-site transportation of universal waste by air, rail, highway, or water.

(m) "Unplanned episodic event" means an episodic event that the generator did not plan or reasonably did not expect to occur, including production process upsets, product recalls, accidental spills, or "acts of nature," such as a tornado, hurricane, or flood.

(n) "Unsaturated zone" or "zone of aeration" means the zone between the land surface and the water table.

(o) "Uppermost aquifer" means the geologic formation nearest the natural ground surface that is an aquifer and includes lower aquifers that are hydraulically interconnected with the aquifer within the facility's property boundary.

(p) "USC" means the United States Code.

(q) "USGS" means the United States Geological Survey.

(r) "USPS" means the United States Postal Service.

(s) "Used oil" means any oil which has been refined from crude oil, or any synthetic oil, which has been used and which as a result of the use, is contaminated by physical or chemical impurities.

(t) "Used oil aboveground tank" means a tank that is used to store or process used oil and that is not an underground storage tank as defined in 40 CFR 280.12.

(u) "Used oil aggregation point" means any site or facility that accepts, aggregates, or stores used oil that is collected only from other used oil generation sites owned or operated by the same owner or operator of the aggregation point, from which used oil is transported to the aggregation point in shipments of not more than 55 gallons. Used oil aggregation points may also accept used oil from household do-it-yourselfers.

(v) "Used oil burner" means a facility where off-specification used oil, as defined in R 299.9809(1)(f), is burned for energy recovery in the devices identified in R 299.9814.

(w) "Used oil collection center" means any site or facility that has provided written notification of used oil management activities to the department and that accepts or aggregates and stores used oil collected from either of the following:

(i) Used oil generators regulated under R 299.9810 who transport used oil to the collection center in shipments of not more than 55 gallons under 40 CFR 279.24.

(ii) Household do-it-yourselfers.

(x) "Used oil existing tank" means a tank that is used for the storage or processing of used oil and that is in operation, or for which installation has commenced, on or before October 15, 1996, the effective date of the amendments to these rules that establish the state's used oil program under RCRA. Installation commenced if the owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the tank and if either of the following provisions applies:

(i) A continuous on-site physical installation program has begun.

(ii) The owner or operator has entered into contractual obligations, that cannot be cancelled or modified without substantial loss, for installation of the tank system to be completed within a reasonable time.

(y) "Used oil fuel" means any fuel that is produced from used oil through processing, blending, or other treatment.

(z) "Used oil fuel marketer" means any person who conducts either of the following activities:

(i) Directs a shipment of off-specification used oil from his or her facility to a used oil burner.

(ii) First claims that the used oil that is to be burned for energy recovery meets the used oil specifications set forth in R 299.9809(1)(f).

(aa) "Used oil generator" means any person, by site, whose act or process produces used oil or whose act first causes the used oil to become subject to regulation.

(bb) "Used oil new tank" means a tank that is used for the storage or processing of used oil and for which installation has commenced after, October 15, 1996, the effective date of amendments to these rules that establish the state's used oil program under RCRA.

(cc) "Used oil processor/re-refiner" means a facility that processes used oil.

(dd) "Used oil tank" means a stationary device that is designed to contain an accumulation of used oil and that is constructed primarily of nonearthen materials, such as wood, concrete, steel, or plastic, that provide structural support.

(ee) "Used oil transfer facility" means any transportation-related facility, including loading docks, parking areas, storage areas, and other areas, where shipments of used oil are held for more than 24 hours and not more than 35 days during the normal course of transportation or before an activity performed under R 299.9813(1) or (2). Transfer facilities that store used oil for more than 35 days are subject to regulation under R 299.9813.

(ff) "Used oil transporter" means any person who transports used oil, any person who collects used oil from more than 1 generator and transports the collected oil, and owners and operators of used oil

transfer facilities. Used oil transporters may consolidate or aggregate loads of used oil for purposes of transportation, but with the following exception, may not process used oil. Transporters may conduct incidental processing operations that occur in the normal course of used oil transportation but that are not designed to produce, or make more amenable for the production of, used oil derived products or used oil fuel.

(gg) "User of the electronic manifest system" means a generator, a transporter, an owner or operator of a hazardous waste or recycling facility, or any other person that is required to use a manifest to comply with any federal or state requirement to track the shipment, transportation, and receipt of either 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 rejected hazardous wastes or regulated container residues that are shipped from a designated facility to an alternative facility or returned to the generator and satisfies 1 or both of the following requirements:

(i) Elects to use the electronic manifest system to obtain, complete, and transmit an electronic manifest format supplied by the system.

(ii) Elects to use the paper manifest form and submits to the electronic manifest system for data processing purposes a paper copy of the manifest, or the data from the paper copy, in accordance with 40 CFR 264.71(a)(2)(v) or 265.71(a)(2)(v). These paper copies are submitted for data exchange purposes only and are not the official copies of record for legal purposes.

(hh) "Vehicle" means each separate conveyance used in the transportation of hazardous waste that is -1 of the following:

(i) A railcar as defined in 49 CFR 171.8.

(ii) A semitrailer, truck, or trailer as defined in act 300.

(iii) A truck tractor as defined in act 300, only if the hazardous waste is actually transported in the cab of the vehicle.

(ii) "Very small quantity generator" means a generator who generates less than or equal to the following amounts in a calendar month:

(i) 100 kilograms of non-acute hazardous waste.

(ii) 1 kilogram of acute hazardous waste.

(iii) 1 kilogram of severely toxic hazardous waste.

(iv) 100 kilograms of 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 acute hazardous waste or severely toxic hazardous waste.

(jj) "Vessel" means a watercraft that is used or is capable of being used as a means of transportation on the water.

(kk) "Washout" means the movement of hazardous waste from the active portion of the facility as a result of flooding.

(ll) "Waste" means material that is defined as waste in R 299.9202.

(mm) "WIETS" means the EPA's Waste Import Export Tracking System.

(nn) "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 and includes horizontal space taken up by any liner, dike, or other barrier that is designed to contain waste in a regulated unit. If the facility contains more than 1 regulated unit, then the waste management area is described by an imaginary line circumscribing the several regulated units.

(oo) "Wastewater treatment unit" means a device that satisfies all of the following requirements:

(i) Is part of a wastewater treatment facility that is subject to regulation-under either section 402 or 307(b) of the federal clean water act, 33 USC 1342 or 1317(b).

(ii) Receives and treats or stores an influent wastewater that is a hazardous waste as defined in R 299.9203, generates and accumulates a wastewater treatment sludge that is a hazardous waste as defined in R 299.9203, or treats or stores a wastewater treatment sludge that is a hazardous waste as

defined in R 299.9203.

(iii) Meets the definition of "tank" or "tank system" specified in R 299.9108.

(pp) "Water (bulk shipment)" means the bulk transportation of hazardous waste that is loaded or carried on board a vessel without containers or labels.

(qq) "Well" means any shaft or pit that is dug or bored into the earth, that is generally of a cylindrical form, and that is often walled with bricks or tubing to prevent the earth from caving in.

(rr) "Wetland" means the areas defined as wetlands in part 303 of the act, MCL 324.30301 to 324.30328.

(ss) "Wipe" means a woven or non-woven shop towel, rag, pad, or swab made of wood pulp, fabric, cotton, polyester blends, or other material.

(tt) "Zone of engineering control" means an area that is under the control of the owner or operator and that, upon detection of a hazardous waste release, can be readily cleaned up before the release of hazardous waste or hazardous constituents to groundwater or surface water.

PART 2. IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

R 299.9201 Purpose and scope.

Rule 201. (1) This part identifies only some of the materials which are hazardous wastes under sections 46 and 48 of part 111 of the act. A material which is not a hazardous waste identified in this part is still a hazardous waste for purposes of those sections if, in the case of section 46 of part 111 of the act, the director has reason to believe that the material may be a hazardous waste within the meaning of section 3 of part 111 of the act, and, in the case of section 48 of part 111 of the act, the statutory elements are established.

(2) The explanation of waste contained in this part applies only to wastes that also are hazardous for purposes of the rules implementing part 111 of the act. For example, it does not apply to materials such as nonhazardous scrap, paper, textiles, and rubbers that are not otherwise hazardous wastes and are recycled.

R 299.9202 "Waste" explained.

Rule 202. (1) A waste is any discarded material that is not excluded by R 299.9204 or that is not excluded by a variance granted under subrules (6) and (7) of this rule. A discarded material is any material that is any of the following:

(a) A material that is abandoned by being disposed of; burned or incinerated; accumulated, stored, or treated, but not recycled, before or instead of being abandoned by being disposed of, burned, or incinerated; or sham recycled.

(b) A material that is recycled, or accumulated, stored, or treated before recycling, and that meets 1 of the following criteria:

(i) It is a material listed in subrule (2) of this rule and is used in a manner constituting disposal by being either of the following:

(A) Applied to or placed on the land in a manner that constitutes disposal.

(B) Used to produce products that are applied to or are 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 waste. A commercial chemical product listed in R 299.9214 is not a waste if it is applied to the land and that is its ordinary manner of use.

(ii) It is a material listed in subrule (2) of this rule and it is burned to recover energy, is used to produce a fuel, or is otherwise contained in fuels, in which cases the fuel itself remains a waste. A commercial chemical product listed in R 299.9214 is not a waste if it is itself a fuel.

(iii) It is a material listed in subrule (2)(a), (b), or (c) of this rule and it undergoes reclamation, except as provided for in R 299.9204(1)(v), (aa), (bb), and (cc).

(iv) It is a material listed in subrule (2)(a), (b), (c), or (d) of this rule and it undergoes speculative accumulation.

(v) It is an inherently waste-like material, having a hazardous waste number of F020, F021, F022, F023, F026, or F028, or is another waste determined by the administrator based on both of the following criteria:

(A) The materials are ordinarily disposed of, burned, or incinerated or the materials contain toxic constituents that are listed in 40 CFR part 261, appendix VIII, and that 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 that are not used or reused during the recycling process.

(B) The material might pose a substantial hazard to human health and the environment when recycled.

(vi) It is an inherently waste-like material that is a secondary material, that is fed to a halogen acid furnace, and that exhibits a characteristic of a hazardous waste or is listed as a hazardous waste under to part 2 of these rules, except for brominated material that meets all of the following criteria:

(A) The material contains a bromine concentration of not less than 45%.
(B) The material contains less than a total of 1% of the toxic organic compounds listed in 40 CFR part 261, appendix VIII.
(C) The material is processed continually on-site in the halogen acid furnace by direct conveyance such as hard piping.
(c) It is a military munition identified as a waste under R 299.9817.
(2) Any of the following materials may be wastes under subrule (1) of this rule:
(a) Spent materials.
(b) Sludges and by-products listed in R 299.9220 to R 299.9222.
(c) Scrap metal that is not excluded under R 299.9204.
(d) Sludges and by-products that exhibit a characteristic of hazardous waste.
(e) Commercial chemical products listed in R 299.9214.
(3) Except as provided in subrule (4) of this rule, materials are not wastes if they can be shown to be recycled by any of the following means:
(a) By being used or reused as ingredients in an industrial process to make a product if the materials are not being reclaimed.
(b) By being used or reused as effective substitutes for commercial products.
(c) By being returned to the original process from which they are generated without first being reclaimed or placed on the land. The material must be returned as a substitute for feedstock materials. If the original process to which the material is returned is a secondary process, then the materials must be managed so that they are not placed on the land.
If the materials are generated and reclaimed within the primary mineral processing industry, the conditions of the exclusion under R 299.9204(1)(v) apply rather than this subrule.
(4) All of the following materials are wastes, even if the recycling involves use, reuse, or return to the original process described in subrule (3) of this rule:
(a) Materials used in a manner constituting disposal or used to produce products that are applied to the land.
(b) Materials burned for energy recovery, used to produce a fuel, or contained in fuels.
(c) Materials accumulated speculatively.
(d) Inherently waste-like materials listed in subrule (1)(b)(v) and (vi) of this rule.
(5) Respondents in actions to enforce regulations implementing part 111 of the act, MCL 324.11101 to 324.11153, who raise a claim that a certain material is not waste or is conditionally exempt from regulation shall demonstrate that there is a known market or disposition for the material and that the respondent meets the terms of exclusion or exemption. In doing so, the respondent 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 for recycling the materials.
(6) The director may determine, on a case-by-case basis, that the following recycled materials are not wastes:
(a) Materials that are accumulated speculatively without sufficient amounts being recycled, as defined in R 299.9107.
(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.

(7) The director shall use the standards, criteria, and procedures outlined in 40 CFR 260.31, 260.33, and 260.34 for making determinations under subrule (6) of this rule.

(8) Persons receiving a variance or determination under subrule (6) of this rule shall comply with the notification requirements of 40 CFR 260.42.

(9) 40 CFR 260.31, 260.33, 260.34, 260.42, 261.31, 261.32, and 261.33 are adopted by reference in R 299.11003, with the exception that "director" replaces "regional administrator" and "administrator," "waste" replaces "solid waste," "R 299.9202" replaces references to "261.2," "R 299.9204" replaces references to "264.4," "R 299.9204(1)(aa)" replaces references to "261.4(a)(24)," and "Michigan site identification form, form EQP5150" replaces references to "EPA Form 8700-12."

R 299.9203 "Hazardous waste" explained.

Rule 203. (1) A waste, as explained in R 299.9202, is a hazardous waste if it is not excluded from regulation pursuant to R 299.9204(1) or (2) and if it meets any of the following criteria:

(a) It exhibits any of the characteristics of hazardous waste identified in R 299.9212.

(b) It is listed in R 299.9213 or R 299.9214 and has not been excluded from the lists pursuant to R 299.9211.

(c) It is a mixture of a waste and 1 or more hazardous wastes that are listed in R 299.9213 or R 299.9214 and has not been excluded from this subdivision pursuant to R 299.9211 or subrule (7) or (8) of this rule; however, mixtures of wastes and hazardous wastes that are listed in R 299.9213 and R 299.9214 are not hazardous wastes, except by application of subdivision (a) or (b) of this subrule, if the generator can demonstrate that the mixture consists of wastewater which, with respect to discharge, is subject to regulation pursuant to either section 402 or section 307(b) of the federal clean water act, including wastewater at facilities that have eliminated the discharge of wastewater, and is 1 of the following:

(i) One or more of the following spent solvents that are listed in R 299.9213, if the maximum total weekly usage of the 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 is not more than 1 part per million or the total measured concentration of these solvents entering the headworks of the facility's astewater treatment system, at facilities subject to regulation under parts 60, 61, or 63 of the federal clean air act or at facilities subject to an enforceable limit in a federal operating permit that minizmizes fugitive emissions, is not more than 1 part per million on an average weekly basis:

(A) Carbon tetrachloride.

(B) Tetrachloroethylene.

(C) Trichloroethylene.

(D) Benzene.

(E) Scrubber waters derived from the combustion of the spent solvents listed in subparagraphs (A) to (D) of this paragraph.

Any facility that uses benzene as a solvent and claims this exemption shall use an aerated biological wastewater treatment system and only lined surface impoundments or tanks before 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 revised sampling and analysis plan 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 at the headworks, the sampling frequency and methodology, and a list of constituents to be monitored. A facility shall be eligible for the direct monitoring option once it receives confirmation that the sampling and analysis plan has been received by the director. The director may reject the sampling and analysis plan if he or she finds that the sampling and analysis plan does not include the required information or the plan parameters do not enable the facility to calculate the weekly average

concentration of these chemicals accurately. If the director rejects the sampling and analysis plan or finds that the facility is not following the sampling and analysis plan, he or she shall notify the facility that it must cease the use of the direct monitoring option until the bases for the rejection are corrected.

(ii) One or more of the following spent solvents that are listed in R 299.9213, if the maximum total weekly usage of the 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 is not more than 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 parts 60, 61, or 63 of the federal clean air act or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions, is not more than 25 parts per million on an average weekly basis:

(A) Methylene chloride.

(B) 1,1,1-Trichloroethane.

(C) Chlorobenzene.

(D) o-dichlorobenzene.

(E) Cresols.

(F) Cresylic acid.

(G) Nitrobenzene.

(H) Toluene.

(I) Methyl ethyl ketone.

(J) Carbon disulfide.

(K) Isobutanol.

(L) Pyridine.

(M) Spent chlorofluorocarbon solvents.

(N) 2-ethoxyethanol.

(O) Scrubber waters derived from the combustion of the spent solvents listed in subparagraphs (A) to (N) of this paragraph.

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 revised sampling and analysis plan 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 at the headworks, the sampling frequency and methodology, and a list of constituents to be monitored. A facility shall be 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 he or she finds that the sampling and analysis plan does not include the required information or the plan parameters do not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the director rejects the sampling and analysis plan or finds that the facility is not following the sampling and analysis plan, he or she shall notify the facility that it must cease the use of the direct monitoring option until the bases for the rejection are corrected.

(iii) One or more of the following wastes that are listed in R 299.9213 if the wastes are discharged to the refinery oil recovery sewer before primary oil/water/solids separation.

(A) Heat exchanger bundle cleaning sludge from the petroleum refining industry, K050.

(B) Crude oil storage tank sediment from petroleum refining operations, K169.

(C) Clarified slurry oil tank sediment or in-line filter/separation solids from petroleum refining operations, K170.

(D) Spent hydrotreating catalyst, K171.

(E) Spent hydrorefining catalyst, K172.

(iv) A discarded hazardous waste, commercial chemical product, or chemical intermediate listed in R 299.9213 or R 299.9214, arising from de minimis losses of the materials from manufacturing

operations in which the materials are used as raw materials or are produced in the manufacturing process. For the purpose of this paragraph, de minimis losses are inadvertent releases to a wastewater treatment system, including any of the following:

(A) Losses from normal material handling operations, such as spills from the unloading or transfer of materials from bins or other containers or leaks from pipes, valves, or other devices that are used to transfer materials.

(B) Minor leaks of process equipment, storage tanks, or containers.

(C) Leaks from well-maintained pump packings and seals.

(D) Sample purgings.

(E) Relief device discharges.

(F) Discharges from safety showers and the rinsing and cleaning of personal safety equipment.

(G) 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 R 299.9214, or any nonmanufacturing facility that claims an exemption for deminimis quantities of wastes listed in R 299.9213 or R 299.9214 shall either have eliminated the discharge of wastewaters or have included in its federal clean water act permit application or submission to its pretreatment control authority the constituents for which each waste was listed in accordance with 40 C.F.R. part 261, appendix VII, and the constituents identified in 40 C.F.R. §268.40 for which each waste has a treatment standard. A facility shall be eligible to claim the exemption once notification of the possible deminimis releases has been provided via the clean water act permit application or the pretreatment control authority submission. A copy of the federal clean water act permit application or the submission to the pretreatment control authority shall be placed in the facility's on-site files.

(v) Wastewater which results from laboratory operations and which contains toxic (T) wastes listed in R 299.9213 or R 299.9214 if the annualized average flow of laboratory wastewater is not more than 1% of total wastewater flow into the headworks of the facility's wastewater treatment or pretreatment system or if the wastes' combined annualized average concentration is not more than 1 part per million in the headworks of the facility's wastewater treatment or pretreatment facility. Toxic (T) wastes which are used in laboratories and which are demonstrated not to be discharged to wastewater shall not be included in the calculation.

(vi) Wastewater from the production of carbamates and carbamoyl oximes, K157, if 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 recovered, divided by the average weekly flow of process wastewater before any dilutions into the headworks of the facility's wastewater treatment system is not more than 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 is not more than 5 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 revised sampling and analysis plan 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 at the headworks, the sampling frequency and methodology, and a list of constituents to be monitored. A facility shall be eligible for the direct monitoring option once it receives confirmation that the sampling and analysis plan has been received by the director. The director may reject the sampling and analysis plan if he or she finds that the sampling and analysis plan does not include the required information or the plan parameters do not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the director rejects the sampling and analysis plan or finds that the facility is not following the sampling and analysis plan, he or she shall notify the facility that it must cease the use of the direct monitoring option until the bases for the rejection are corrected.

(vii) Wastewater derived from the treatment of organic waste from the production of carbamates

and carbamoyl oximes, K156, if the maximum concentration of formaldehyde, methyl chloride, methylene chloride, and triethylamine before any dilutions into the headworks of the facility's wastewater treatment system is not more than 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 is not more than 5 milligrams per liter 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 revised sampling and analysis plan 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 at the headworks, the sampling frequency and methodology, and a list of constituents to be monitored. A facility shall be eligible for the direct monitoring option once it receives confirmation that the sampling and analysis plan has been received by the director. The director may reject the sampling and analysis plan if he or she finds that the sampling and analysis plan does not include the required information or the plan parameters do not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the director rejects the sampling and analysis plan or finds that the facility is not following the sampling and analysis plan, he or she shall notify the facility that it must cease the use of the direct monitoring option until the bases for the rejection are corrected.

(d) It is a mixture of a waste and a hazardous waste that meets the characteristic of severe toxicity pursuant to R 299.9212(5).

(e) It is a used oil that contains more than 1,000 parts per million total halogens. Used oil that contains more than 1,000 parts per million is presumed to be a hazardous waste and is regulated as such under part 111 of the act and these rules. A person may rebut the presumption by demonstrating that the used oil does not contain hazardous waste. The demonstration may be made by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents that are listed in 40 C.F.R. part 261, appendix VIII. The rebuttable presumption rule does not apply to the following materials:

(i) Metalworking oils or fluids that contain chlorinated paraffins if the oils or fluids are processed through a tolling agreement as specified in 40 C.F.R. §279.24(c) to reclaim the oils or fluids. The rebuttable presumption does apply, however, if the oils or fluids are recycled in any other manner or are disposed of.

(ii) Used oils that are contaminated with chlorofluorocarbons which have been removed from refrigeration units if the chlorofluorocarbons are destined for reclamation. The rebuttable presumption does apply, however, if the used oils are contaminated with chlorofluorocarbons that have been mixed with used oil from sources other than refrigeration units.

(2) A waste that is not excluded from regulation pursuant to R 299.9204(1) or (2) becomes a hazardous waste when any of the following events occur:

(a) In the case of a waste that is listed in R 299.9213 or R 299.9214, when the waste first meets the listing description.

(b) In the case of a mixture of waste and one or more listed hazardous wastes or severely toxic wastes, when a waste that is hazardous pursuant to R 299.9212(5), R 299.9213, or R 299.9214 is first added to the waste.

(c) In the case of any other waste, including a waste mixture, when the waste exhibits any of the characteristics identified in R 299.9212.

(3) Unless and until it meets the criteria of subrule (5) of this rule, a hazardous waste will remain a hazardous waste, and, except as provided in subrules (4), (7), and (8) of this rule, any 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 runoff, is a hazardous waste. Materials that are reclaimed from wastes and that are used beneficially are not wastes and hence are not hazardous wastes pursuant to this subrule, unless the reclaimed material is burned for energy recovery or used in a manner that constitutes disposal.

(4) All of the following wastes are not hazardous even though they are generated from the treatment, storage, or disposal of a hazardous waste, unless they exhibit 1 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, as defined by standard industrial codes 331 and 332 in the office of management and budget document entitled "Standard Industrial Classification Manual."

(b) Wastes from burning any of the materials exempted from regulation by R 299.9206(3)(c) to (f).

(c) Nonwastewater residues, such as slag, which result 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 and which are disposed of in units regulated under part 115 of the act, if the residues are in compliance with the specified generic exclusion levels. Testing requirements shall be incorporated in a facility's waste analysis plan or generator's self-implementing waste analysis plan. At a minimum, samples of residues shall be collected and analyzed quarterly or when the process or operation generating the waste changes. A person who claims 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:

(i) For K061 and K062 nonwastewater high temperature metals recovery residues, the specified generic exclusion levels are as follows:

(A) Antimony, 0.10 mg/l.
(B) Arsenic, 0.50 mg/l.
(C) Barium, 7.6 mg/l.
(D) Beryllium, 0.010 mg/l.
(E) Cadmium, 0.050 mg/l.
(F) Chromium (total), 0.33 mg/l.
(G) Lead, 0.15 mg/l.
(H) Mercury, 0.009 mg/l.
(I) Nickel, 1.0 mg/l.
(J) Selenium, 0.16 mg/l.
(K) Silver, 0.30 mg/l.
(L) Thallium, 0.020 mg/l.
(M) Zinc, 70 mg/l.

(ii) For F006 nonwastewater high temperature metals recovery residues, the specified generic exclusion levels are as follows:

(A) Antimony, 0.10 mg/l.
(B) Arsenic, 0.50 mg/l.
(C) Barium, 7.6 mg/l.
(D) Beryllium, 0.010 mg/l.
(E) Cadmium, 0.050 mg/l.
(F) Chromium (total), 0.33 mg/l.
(G) Cyanide (total), 1.8 mg/kg.
(H) Lead, 0.15 mg/l.
(I) Mercury, 0.009 mg/l.
(J) Nickel, 1.0 mg/l.
(K) Selenium, 0.16 mg/l.
(L) Silver, 0.30 mg/l.
(M) Thallium, 0.020 mg/l.
(N) Zinc, 70 mg/l.

(iii) For nonwastewater residues resulting from the high temperature metals recovery processing of

KO61, K062, or F006 waste which meet the generic exclusion levels specified in this subdivision and which do not exhibit any hazardous waste characteristic, and which are sent to a unit regulated under part 115 of the act, the person claiming the exclusion shall send a 1-time notification and certification to the director. The notification and certification shall be in compliance with all of the following provisions:

(A) The notification and certification shall be maintained at the facility.

(B) The notification and certification shall be updated by the person claiming the exclusion if the process or operation generating the waste changes or if the unit regulated under part 115 of the act that is receiving the waste changes. However, the director need only be notified on an annual basis, by the end of the calendar year, if a change occurs.

(C) The notification shall include all of the following information:

(1) The name and address of the unit regulated under part 115 of the act that is receiving the waste shipment.

(2) The site identification number and treatability group of the waste at the initial point of generation.

(3) The treatment standards applicable to the waste at the initial point of generation.

(D) The certification shall be signed by an authorized representative and shall include the following statement: "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 organic wastes from the production of carbamates and carbamoyl oximes, K156, or wastewaters from the production of carbamates and carbamoyl oximes, K157.

(e) Catalyst inert support media separated from either or both of the following wastes listed in R 299.9213:

(i) Spent hydrotreating catalyst, K171.

(ii) Spent hydrorefining catalyst, K172.

(5) Any waste that is described in subrule (3) of this rule is not a hazardous waste if it is in compliance with the following criteria, as applicable:

(a) In the case of any waste, it does not exhibit any of the characteristics of hazardous waste that are identified in R 299.9212. However, a waste that exhibits a characteristic at the point of generation may still be subject to the requirements of 40 C.F.R. part 268, even if the waste does not exhibit a characteristic at the point of land disposal.

(b) In the case of a waste which is listed in R 299.9212(5), R 299.9213, or R 299.9214, which contains a waste that is listed in these rules, or which is derived from a waste that is listed in these rules, the waste also has been excluded from regulation pursuant to R 299.9211.

(6) Notwithstanding subrules (1) to (5) of this rule and if the debris, as defined in 40 C.F.R. part 268, does not exhibit a hazardous characteristic identified in R 299.9212, the following materials are not subject to regulation under part 111 of the act and these rules, except for R 299.9809 to R 299.9816:

(a) Hazardous debris that has been treated using 1 of the required extraction or destruction technologies specified in table 1 of 40 C.F.R. §268.45. A person who claims 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.

(b) Debris that the director, considering the extent of contamination, has determined is no longer contaminated with hazardous waste.

(7) A hazardous waste that is listed in R 299.9213 or R 299.9214 solely because it exhibits 1 or more characteristics of ignitability, corrosivity, or reactivity, as defined under R 299.9212, is not a

hazardous waste, if the waste no longer exhibits any characteristic of hazardous waste identified in R 299.9212. However, the waste remains subject to 40 C.F.R. part 268, as applicable, even if the waste no longer exhibits a characteristic at the point of land disposal. This exclusion is limited to any of the following:

(a) A mixture of a waste and a hazardous waste listed in R 299.9213 or R 299.9214 solely because it exhibits 1 or more characteristics of ignitability, corrosivity, or reactivity which is generated as a result of a cleanup conducted at the individual site of generation pursuant to part 31, part 111, part 201, part 213, or CERCLA.

(b) A waste generated from the treatment, storage, or disposal of a hazardous waste listed in R 299.9213 or R 299.9214 solely because it exhibits the characteristic of ignitability.

(c) A mixture of a waste excluded from regulation under R 299.9204(2)(i) and a hazardous waste listed in R 299.9213 or R 299.9214 solely because it exhibits 1 or more of the characteristics of ignitability, corrosivity, or reactivity which is generated as a result of a cleanup conducted at the individual site of generation pursuant to part 31, part 111, part 201, part 213, or CERCLA.

(8) Hazardous waste that contains radioactive waste is no longer a hazardous waste when it meets the eligibility criteria and conditions of R 299.9822 and R 299.9823. This exclusion is limited to either of the following:

(a) A mixture of a waste and an eligible radioactive mixed waste.

(b) A waste generated from the treatment, storage, or disposal of an eligible radioactive mixed waste.

(9) The office of management and budget document entitled "Standard Industrial Classification Manual" is adopted by reference in R 299.11007.

R 299.9204 Exclusions.

Rule 204. (1) The following materials are not wastes for the purpose of part 111 of the act, MCL 324.11101 to 324.11153, and these rules:

(a) Domestic sewage and 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.

(b) Industrial wastewater discharges that are point source discharges subject to regulation under section 402 of the federal clean water act, 33 USC 1342, as amended, except for discharges to injection wells.

(c) Irrigation return flows.

(d) Source, special nuclear, or by-product material as defined by the atomic energy act of 1954, 42 USC 2011 to 2296b-7, as amended.

(e) Materials that are subjected to in-situ mining techniques and that are not removed from the ground as part of the extraction process.

(f) Pulping liquors that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless the liquors are accumulated speculatively, as defined in R 299.9107.

(g) Spent sulfuric acid that is used to produce virgin sulfuric acid provided it is not accumulated speculatively, as defined in R 299.9107.

(h) Secondary materials that are reclaimed and returned to the original process or processes in which they were generated and where they are reused in the production process, if all of the following provisions apply:

(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) The reclamation does not involve controlled flame combustion, such as occurs in boilers, industrial furnaces, or incinerators.

(iii) The secondary materials are not accumulated in the tanks for more than 12 months without

being reclaimed.

(iv) The reclaimed material is not used to produce a fuel and is not used to produce products that are used in a manner that constitutes disposal.

(i) Spent wood preserving solutions that have been reclaimed and that are reused for their original intended purpose.

(j) Wastewaters from the wood preserving process that have been reclaimed and that are reused to treat wood.

(k) Nonwastewater splash condenser dross residue from the treatment of K061 in high temperature metals recovery units, if the residue, if shipped, is shipped, in containers and is not land disposed before recovery.

(l) Oil-bearing hazardous secondary materials such as sludges, by-products, and spent materials, that are generated at a petroleum refinery (SIC code 2911) and are inserted into the petroleum refining process (SIC code 2911), including distillation, catalytic cracking, fractionation, or thermal cracking units, unless the material is placed on the land, or accumulated speculatively before being so recycled. Materials inserted into thermal cracking units are excluded under this subdivision if the coke product does not exhibit a characteristic of a hazardous waste. Oil-bearing hazardous secondary materials may be inserted into the same petroleum refinery where they are generated, or sent directly to another refinery, and still be excluded under this subdivision. Except as provided for in subdivision (m) of this subrule, oil-bearing hazardous secondary materials generated elsewhere in the petroleum industry are not excluded under this subdivision. Residuals generated from processing or recycling materials excluded under this subdivision, where the materials as generated would have otherwise met a listing under R 299.9213 or R 299.9214, are designated as F037 wastes when disposed of or intended for disposal.

(m) Recovered oil that is recycled in the same manner and with the same conditions as described in subdivision (l) of this subrule. 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, 4789, 4922, 4923, 5171, and 5172). Recovered oil does not include oil-bearing hazardous wastes listed in part 2 of these rules. However, oil recovered from oil-bearing hazardous wastes listed in part 2 of these rules may be considered recovered oil. Recovered oil also does not include used oil as defined in R 299.9109.

(n) EPA hazardous waste numbers 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 R 299.9212 when, after generation, the materials are recycled to coke ovens or to the tar recovery process as a feedstock to produce coal tar or are mixed with coal tar before the tar's sale or refining. This exclusion is conditioned on there being no land disposal of the wastes from the point that the wastes are generated to the point that they are recycled to coke ovens or tar recovery or refining processes or are mixed with coal tar.

(o) Materials that are reclaimed from used oil and that are used beneficially if the materials are not burned for energy recovery or used in a manner that constitutes disposal of the materials.

(p) Excluded scrap metal that is being recycled.

(q) Shredded circuit boards that are being recycled if both of the following requirements are met:

(i) The shredded circuit boards are stored in containers sufficient to prevent a release to the environment before recovery.

(ii) The shredded circuit boards are free of mercury switches, mercury relays, and nickel-cadmium batteries and lithium batteries.

(r) Condensates derived from the overhead gases from kraft mill steam strippers that are used to comply with 40 CFR 63.446(e). This exemption applies only to combustion at the mill generating the condensates.

(s) 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, if both the following requirements are met:

(i) The oil is hazardous only because it exhibits the characteristic of ignitability as defined in R 299.9212 or toxicity for benzene as defined in R 299.9212 and R 299.9217.

(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.

(t) 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 speculatively accumulated.

(u) Before reuse, the wood preserving wastewaters and spent wood preserving solutions described in subdivisions (i) and (j) of this subrule if all of the following requirements are met:

(i) 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 use.

(ii) Before reuse, the wastewaters and spent wood preserving solutions are managed to prevent releases to either the land or groundwater or both.

(iii) Units used to manage wastewaters or spent wood preserving solutions before reuse can be visually or otherwise determined to prevent releases to either land or groundwater.

(iv) Drip pads used to manage the wastewaters or spent wood preserving solutions before reuse are in compliance with 40 CFR part 265, subpart W regardless of whether the plant generates a total of less than 1,000 kilograms per month of hazardous waste.

(v) Before operating under this exclusion, the plant owner or operator complies with all of the following requirements; otherwise the exclusion shall not apply:

(A) Submits a 1-time notification to the director 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 regulations."

(B) The owner or operator maintains a copy of the 1-time notification required under paragraph (v) of this subdivision in its on-site records until closure of the facility.

(C) If the plant voids the exclusion by not complying with the exclusion conditions and wishes to have its wastes excluded again, it shall apply to the director for reinstatement. The director may reinstate the exclusion upon finding that the plant has returned to compliance with all of the conditions and that violations are not likely to recur.

(v) Spent materials, other than hazardous waste listed under R 299.9213 or R 299.9214, that are generated within the primary mineral processing industry from which minerals, acids, cyanide, water, or other values are recovered by mineral processing or by beneficiation if all of the following requirements are met:

(i) The spent material is legitimately recycled to recover minerals, acids, cyanide, water, or other values.

(ii) The spent material is not speculatively accumulated.

(iii) Except as provided under paragraph (iv) of this subdivision, the spent material is stored in tanks, containers, or buildings that meet the following requirements as applicable:

(A) If using a building, the building must 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 which may have partially earthen floors provided that the spent material is stored on the non-earthen portion, have a roof that is suitable for diverting rainwater away from the foundation, and be designed, constructed, and operated to prevent significant releases of the material to the environment.

(B) If using a tank, the tank must be free standing, not meet the definition of a surface

impoundment, be manufactured of a material suitable for containment of its contents, be operated in a manner that controls fugitive dust if the tank contains any particulate that may be subject to wind dispersal, and be designed, constructed, and operated to prevent significant releases of the material to the environment.

(C) If using a container, the container must be free standing and be manufactured of a material suitable for containment of its contents, be operated in a manner that controls fugitive dust if the container contains any particulate that may be subject to wind dispersal, and be designed, constructed, and operated to prevent significant releases of the material to the environment.

(iv) The spent materials are placed on pads if all of the following requirements are met:

(A) The solid mineral processing spent materials do not contain any free liquid.

(B) The pad is designed, constructed, and operated to prevent significant releases of the spent material into the environment.

(C) The pad provides the same degree of containment afforded by non-RCRA tanks, containers, and buildings eligible for this exclusion.

(D) The pad is designed of non-earthen material that is compatible with the chemical nature of the mineral processing spent material.

(E) The pad is capable of withstanding physical stresses associated with placement and removal.

(F) The pad has run-on/run-off controls.

(G) The pad is operated in a manner that controls fugitive dust.

(H) The integrity of the pad is ensured through inspections and maintenance programs.

(I) The director makes a site-specific determination that the materials may be placed on a pad rather than in tanks, containers, or buildings. In making a determination, the director shall consider whether storage on a pad poses the potential for significant releases via groundwater, surface water, and air exposure pathways. When assessing the groundwater, surface water, and air exposure pathways, the director shall consider the volume and physical and chemical properties of the spent material, including its potential for migration off of 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. Before making a determination, the director shall provide notice and the opportunity for comment to all persons potentially interested in the determination. Notice may be accomplished by placing notice of the action in major local newspapers or broadcasting notice over local radio stations.

(v) The owner or operator provides notice to the director that provides the following information and is updated if there is a change in the type of materials recycled or the location of the recycling process:

(A) The types of materials to be recycled.

(B) The type and location of storage units and recycling processes.

(C) The annual quantities expected to be placed in land-based units.

(vi) For the purposes of the exclusion under R 299.9204(2)(i), mineral processing spent materials must be the result of mineral processing and may not include any hazardous wastes listed under R 299.9213 or R 299.9214. Listed hazardous wastes and characteristic hazardous waste generated by non-mineral processing industries are not eligible for the conditional exclusion from the definition of waste.

(w) Hazardous secondary materials used to make zinc fertilizers, if the following conditions are met:

(i) Hazardous secondary materials used to make zinc micronutrient fertilizers must not be accumulated speculatively.

(ii) Generators and intermediate handlers of zinc-bearing hazardous secondary materials that are to be incorporated into zinc fertilizers shall comply with all of the following requirements:

(A) Submit a 1-time notice to the director that contains the name, address, and site identification 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 of this subdivision.

(B) Store the excluded secondary material in buildings, tanks, or containers 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 must be an engineered structure made of non-earthen materials that provide structural support, and must have a floor, walls, and a roof that prevent wind dispersal and contact with rainwater. Tanks used for this purpose must be structurally sound and, if outdoors, must have roofs or covers that prevent contact with wind and rain. Containers that are used for this purpose must be kept closed except when it is necessary to add or remove material, and must be in sound condition. Containers that are stored outdoors must be managed within storage areas that have containment structures or systems sufficiently impervious to contain leaks, spills, and accumulated precipitation; provide for effective drainage and removal of leaks, spills, and accumulated precipitation; and 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 this subdivision.

(D) Maintain at the generator's or intermediate handler's facility for not less than 3 years records of all shipments of excluded hazardous secondary materials. At a minimum, the records for each shipment must include the name of the transporter, the date of the shipment, the name and address of the facility that received the excluded material, documentation confirming receipt of the shipment, and the 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 comply with all of the following requirements:

(A) Store excluded hazardous secondary material under the storage requirements for generators and intermediate handlers, as specified in paragraph (ii) of this subdivision.

(B) Submit a 1-time notification to the director which contains the name, address, and site identification number of the manufacturing facility and identifies when the manufacturer intends to begin managing excluded, zinc-bearing hazardous secondary materials under the conditions of this subdivision.

(C) Maintain for not less than 3 years records of all shipments of excluded hazardous secondary materials received by the manufacturer. At a minimum, the records for each shipment must include the name and address of the generating facility, the name of the transporter, the date the materials were received, the quantity of materials 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 from which they were generated.

(iv) Nothing in this subdivision preempts, overrides, or otherwise negates the requirements of R 299.9302, which requires any person who generates a waste to determine if the waste is a hazardous waste.

(v) Interim status and licensed storage units that have been used to store only zinc-bearing hazardous wastes before the submission of the 1-time notice described in paragraph (ii) of this subdivision, and that afterward will be used only to store hazardous secondary materials excluded under this subdivision, are not subject to the closure requirements of part 6 of these rules.

(x) Zinc fertilizers made from hazardous wastes, or hazardous secondary materials that are excluded under subdivision (w) of this subrule, if the following conditions are met:

(i) The fertilizers meet the following contaminant limits, established as the maximum allowable total concentration in fertilizer per 1% of zinc, for metal contaminants:

(A) Arsenic, 0.3 parts per million.
(B) Cadmium, 1.4 parts per million.
(C) Chromium, 0.6 parts per million.
(D) Lead, 2.8 parts per million.
(E) Mercury, 0.3 parts per million.
(ii) The fertilizers meet the contaminant limit for dioxin contaminants of not more than 8 parts per trillion of dioxin, measured as toxic equivalent.
(iii) The manufacturer performs sampling and analysis of the fertilizer product to determine compliance with the contaminant limits for metals not less than every 6 months, and for dioxins not less than every 12 months. Testing must also be performed when 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 methods to demonstrate that no constituent of concern is present in the product at concentrations above the applicable limits. The manufacturer shall ensure that the sampling and analysis are unbiased, precise, and representative of the products introduced into commerce.
(iv) The manufacturer maintains for not less than 3 years records of all sampling and analysis performed for the purposes of determining compliance with the requirements of paragraph (iii) of this subdivision. At a minimum, the records must include all of the following:
(A) The dates and times product samples were taken, and the dates the samples were analyzed.
(B) The names and qualifications of the persons 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.
(F) All laboratory analytical results used to determine compliance with the contaminant limits specified in paragraphs (i) and (ii) of this subdivision.
(y) Used CRTs that meet any of the following requirements:
(i) Used, intact CRTs unless they are disposed or are speculatively accumulated by CRT collectors or glass processors.
(ii) Used, intact CRTs when exported for recycling if they meet the requirements of R 299.9231(5).
(iii) Used, broken CRTs if they meet the requirements of R 299.9231(1) and (2).
(iv) Glass removed from CRTs if it meets the requirements of R 299.9231(3).
(z) Solvent-contaminated wipes that are sent for cleaning and reuse are not wastes at the point of generation if all of the following requirements are met:
(i) The wipes, when accumulated, stored, and transported, are contained in non-leaking, closed containers that are labeled "Excluded Solvent-Contaminated Wipes." The containers must be able to contain free liquids, if free liquids occur. During accumulation, a container is considered closed if there is complete contact between the fitted lid and the rim, except when it is necessary to add or remove wipes. If the container is full, the wipes are no longer being accumulated, or the container is being transported, the container must 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 wipes must not be accumulated by the generator for more than 180 days from the start date of accumulation for each container before 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 wipes must contain no free liquids.
(iv) Free liquids removed from the wipes or from the container holding the wipes must be managed in accordance with these rules.
(v) Generators shall maintain at their site all of the following:

(A) The name and address of the laundry or dry cleaner that is receiving the wipes.

(B) Documentation that the 180-day accumulation time limit in paragraph (ii) of this subdivision is being met.

(C) A description of the process the generator is using to ensure that the 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 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 federal clean water act, 33 USC 1311, 1341, and 1317.

(aa) Hazardous secondary material that is generated and legitimately reclaimed within the United States or its territories and under the control of the generator, if all of the following requirements are met:

(i) The hazardous secondary material is generated and reclaimed in accordance with any of the following conditions:

(A) It is reclaimed at the generating facility. For the purpose of this requirement, the generating facility means all contiguous property owned, leased, or otherwise controlled by the hazardous secondary material generator.

(B) It is reclaimed at a different facility that is controlled by the generator, and the generator provides the following certification to the department: "On behalf of [insert generating facility name], I certify that this facility will send the indicated hazardous secondary material to [insert reclaiming facility name], which is controlled by [insert generating facility name] and that [insert name of either generating or reclaiming facility name] has acknowledged full responsibility for the safe management of the secondary hazardous material."

(C) It is reclaimed at a different facility and both the generating facility and the reclaiming facility are controlled by the same person, and the generator provides the following certification to the department: "On behalf of [insert generating facility name], I certify that this facility will send the indicated hazardous secondary material to [insert reclaiming facility name], that both facilities are under common control, and that [insert name of either generating or reclaiming facility name] has acknowledged full responsibility for the safe management of the secondary hazardous material." For the purpose of this requirement, "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 shall not be considered to "control" the facilities. The generating and reclaiming facilities must both maintain at their facilities for not less than 3 years records of hazardous secondary materials sent or received under this exclusion. In both cases, the records must 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 this exclusion. These requirements may be satisfied by routine business records such as financial records, bills of lading, copies of DOT shipping papers, or electronic confirmations of receipt.

(D) The hazardous secondary material is generated under 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 manufacture, including any releases of hazardous secondary materials that occur during the manufacturing process." The tolling contractor-shall maintain at its facility for not less than 3 years records of hazardous secondary materials received under its written contract with the toll manufacturer, and the toll manufacturer shall maintain at its facility for not less than 3 years records

of hazardous secondary materials shipped under its written contract with the tolling contractor. In both cases, the records must contain the name of the transporter, the date of the shipment, and the type and quantity of the hazardous secondary materials shipped or received under the written contract. These requirements may be satisfied by routine business records such as financial records, bills of lading, copies of DOT shipping papers, or electronic confirmations of receipt. For the purpose of this requirement, "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 and "toll manufacturer" means a person who produces a product or intermediate made from specified unused materials under a written contract with a tolling contractor.

(ii) The hazardous secondary material is contained. A hazardous secondary material that is released to the environment is discarded and a waste unless it is immediately recovered for reclamation. Hazardous secondary material managed in a unit with leaks or other continuing or intermittent unpermitted releases is discarded and a waste.

(iii) The hazardous secondary material is not speculatively accumulated.

(iv) A notification is provided in accordance with 40 CFR 260.42.

(v) The hazardous secondary material is not otherwise subject to material-specific management conditions under this subrule when reclaimed, and it is not a spent lead-acid battery.

(vi) A person performing the recycling of hazardous secondary materials under this exclusion shall maintain documentation of their legitimacy determination on-site. The documentation must include a written description of how the recycling meets all 3 factors in R 299.9232 and be maintained for 3 years after the recycling operation has ceased.

(vii) The emergency preparedness and response requirements of R 299.9234.

(bb) Hazardous secondary material that is generated and then transferred to another person for reclamation if all of the following requirements are met:

(i) The hazardous secondary material is not speculatively accumulated.

(ii) The hazardous secondary 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 and is packaged in accordance with applicable DOT regulations in 49 CFR parts 173, 178, and 179.

(iii) The hazardous secondary material is not otherwise subject to material-specific management conditions under this subrule when reclaimed, and it is not a spent lead-acid battery.

(iv) The reclamation of the hazardous secondary material is legitimate as outlined in R 299.9232.

(v) The hazardous secondary material generator meets all of the following conditions:

(A) The hazardous secondary material is contained. A hazardous secondary material that is released to the environment is discarded and a waste unless it is immediately recovered for the purpose of recycling. Hazardous secondary material managed in a unit with leaks or other continuing or intermittent unpermitted releases is discarded and a waste.

(B) Before arranging for transport of hazardous secondary materials to a reclamation facility or facilities where the management of the hazardous secondary materials is not addressed under an operating license issued under these rules or by the interim status standards in part 6 of these rules, the hazardous secondary material generator shall make reasonable efforts to ensure that each reclaimer intends to properly and legitimately reclaim the hazardous secondary material and not discard it, and that each reclaimer will manage the hazardous secondary material in a manner that is protective of human health and the environment. If the hazardous secondary material will be passing through an intermediate facility where the management of the hazardous secondary material is not addressed under an operating license issued under these rules or by the interim status standards under part 6 of these rules, the hazardous secondary material generator shall make contractual arrangements with the intermediate facility to ensure that the material is sent to the reclamation facility identified by the generator, and make reasonable efforts to ensure that the intermediate facility will manage the

hazardous secondary material in a manner that is protective of human health and the environment. The hazardous secondary material generator shall repeat these reasonable efforts every 3 years at a minimum to claim the exclusion and send the hazardous secondary materials to each reclaimer and any intermediate facility. In making these reasonable efforts, the hazardous material generator may use any credible evidence available, including information gathered by the generator, provided by the reclaimer or intermediate facility, or provided by a third party. The hazardous secondary material generator shall confirm that all of the following requirements are met for each reclamation facility and any intermediate facility:

(I) The available information indicates that the reclamation process is legitimate under R 299.9232. In evaluating this requirement, the hazardous secondary material generator may rely on their existing knowledge of the physical and chemical properties of the hazardous secondary material, as well as information from other sources about the reclamation process.

(II) The publicly available information indicates that the reclamation facility and any intermediate facility used by the hazardous secondary material generator has notified the appropriate authorities of the hazardous secondary materials reclamation activities under 40 CFR 260.42, and that the financial assurance requirements of paragraph (vi)(F) of this subdivision have been satisfied. In evaluating this requirement, the hazardous secondary material generator may rely on the available information documenting the reclamation facility's and any intermediate facility's compliance with the notification requirements of 40 CFR 260.42, including the requirement in 40 CFR 260.42(a)(5).

(III) The publicly available information indicates that the reclamation facility or any intermediate facility used by the hazardous secondary material generator has not had a formal enforcement action taken against the facility in the previous 3 years for violations of part 111 of the act, MCL 324.11101 to 324.11153, and these rules and has not been classified as a significant non-complier under RCRA. In evaluating this requirement, the hazardous secondary material generator may rely on the publicly available information from this state or the EPA. If the reclamation facility or any intermediate facility that is used by the hazardous secondary material generator has had a formal enforcement action taken against the facility in the previous 3 years for violations of part 111 of the act, MCL 324.11101 to 324.11153, and these rules, the generator must have credible evidence that the facility will manage the hazardous secondary materials in accordance with the applicable regulations. The hazardous secondary material generator may obtain additional information from this state, the EPA, or the facility itself that the facility has addressed the violations, 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.

(IV) The publicly available information indicates that the reclamation facility or any intermediate facility used by the hazardous secondary material generator has the equipment and trained personnel to safely recycle the hazardous secondary material. In evaluating this requirement, the hazardous secondary material generator may rely on a description by the reclamation facility or by an independent third party of the equipment and trained personnel to be used to recycle the generator's hazardous secondary material.

(V) If residuals are generated from the reclamation of the excluded hazardous secondary materials, the reclamation facility shall have the licenses required, if any, to manage the residuals. If the reclamation facility does not have the required licenses, the facility shall have a contract with an appropriately licensed facility to dispose of the residuals. If the reclamation facility does not have the required licenses or contracts, the hazardous secondary material generator shall alternatively have credible evidence that the residuals will be managed in a manner that is protective of human health and the environment. In evaluating these requirements, the hazardous secondary material generator may rely on publicly available information from this state or the EPA, or information provided by the facility itself.

(C) The hazardous secondary material generator shall maintain at the generating facility for not less

than 3 years documentation and certification that reasonable efforts were made for each reclamation facility and, if applicable, intermediate facility where the management of the hazardous secondary material is not addressed under an operating license issued under these rules or by the interim status standards of part 6 of these rules before transferring hazardous secondary material. The documentation and certification must be made available upon request by the department within 72 hours, or within a longer period of time as approved by the department. The certification statement must include all of the following information:

(I) The printed and official title of an authorized representative of the hazardous secondary material generator company, the authorized representative's signature, and the date signed.

(II) The following language: "I hereby certify in good faith and to the best of my knowledge that, before arranging for transport of excluded hazardous secondary materials to [insert name(s) of reclamation facility and any intermediate facility], reasonable efforts were made in accordance with R 299.9204(1)(bb)(v)(B) to ensure that the hazardous secondary materials would be recycled legitimately, and otherwise managed in a manner that is protective of human health and the environment, and that the efforts were based on current and accurate information."

(D) The hazardous secondary material generator shall maintain at the generator facility for not less than 3 years records of all off-site shipments of hazardous secondary materials. For each shipment, these records must, at a minimum, contain all of the following information:

(I) The name of the transporter and date of the shipment.

(II) The 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.

(E) The hazardous secondary material generator shall maintain for not less than 3 years confirmations of receipt from each reclaimer and, if applicable, each intermediate facility for all off-site shipments of hazardous secondary materials.

(F) The emergency preparedness and response requirements of R 299.9234.

(vi) Reclaimers of hazardous secondary material excluded from regulation under this exclusion and intermediate facilities meet all of the following conditions:

(A) The reclaimer and intermediate facility shall maintain at its facility for not less than 3 years records of all shipments of hazardous secondary material that were received at the facility and, if applicable, for all shipments of hazardous secondary material that were received and subsequently sent off-site from the facility for further reclamation. For each shipment, these records must, at a minimum, include the name of the transporter and date of the shipment, the 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 material was received from, the type and quantity of hazardous secondary material in the shipment, and 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 or reclaimers designated by the hazardous secondary material generator.

(C) The reclaimer and intermediate facility shall send the hazardous secondary material generator confirmations of receipt for all off-site shipments of hazardous secondary material. Confirmations of receipt must include the name and address of the reclaimer or intermediate facility, the type and quantity of hazardous secondary material received, and the date that the hazardous secondary material was received. This requirement may be satisfied by routine business records such as 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 that is 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 must be managed in a manner that is protective of human health and the environment. If any residuals exhibit a hazardous characteristic according to part 2 of these rules, or they themselves are specifically listed in part 2 of these rules, the residuals are hazardous waste and must be managed in accordance with the applicable requirements of these rules.

(F) The reclaimer and intermediate facility shall have financial assurance as required under part 7 of these rules.

(G) The reclaimer and intermediate facility shall have an operating license issued under these rules or comply with the interim status standards under part 6 of these rules that address the management of the hazardous secondary materials.

(vii) All persons claiming the exclusion under this subdivision shall provide notification as required under 40 CFR 260.42.

(cc) Hazardous secondary material that is generated and then transferred to another person for remanufacturing if all of the following requirements are met:

(i) The hazardous secondary material consists of 1 or more of the following spent solvents:

(A) Toluene.

(B) Xylenes.

(C) Ethylbenzene.

(D) 1,2,4-trimethylbenzene.

(E) Chlorobenzene.

(F) n-hexane.

(G) Cyclohexane.

(H) Methyl tert-butyl ether.

(I) Acetonitrile.

(J) Chloroform.

(K) Chloromethane.

(L) Dichloromethane.

(M) Methyl isobutyl ketone.

(N) NN-dimethylformamide.

(O) Tetrahydrofuran.

(P) n-butyl alcohol.

(Q) Ethanol.

(R) Methanol.

(ii) The hazardous secondary material originated from using 1 or more of the solvents listed in paragraph (i) of this subdivision 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), or paints and coatings manufacturing (NAICS 325510) sectors.

(iii) The hazardous secondary material generator sends the hazardous secondary material spent solvents listed in paragraph (i) of this subdivision to a remanufacturer in the pharmaceutical manufacturing (NAICS 325412), basic organic chemical manufacturing (NAICS 325199), plastics and resins manufacturing (NAICS 325211), or paints and coatings manufacturing (NAICS 325510) sectors.

(iv) After manufacturing 1 or more of the solvents listed in paragraph (i) of this subdivision, the use of the remanufactured solvent is 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), or paints and coatings manufacturing (NAICS 325510) sectors or to using them as ingredients in a product. These allowed uses correspond to chemical functional uses enumerated under the chemical data reporting rules of the toxic substances control act, 40 CFR parts 704, 710, and 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 1 or more of the solvents listed in paragraph (i) of this subdivision, 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.

(vi) Both the hazardous secondary material generator and the remanufacturer shall do all of the following:

(A) Notify the EPA or the director and update the notification every 2 years under 40 CFR 260.42.

(B) Develop and maintain an up-to-date remanufacturing plan that identifies all of the following:

(I) The name, address, and site identification number of the generator and the remanufacturer.

(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.

(V) A certification statement 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), or paints and coatings manufacturing (NAICS 325510) sectors, and will accept the spent solvents for the sole purpose of remanufacturing into commercial-grade solvents 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 a product ingredient. 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 parts 60, 61, or 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 40 CFR part 261, subparts AA, BB, and CC."

(C) Maintain records of shipments and confirmations of receipts for a period of 3 years from the dates of the shipments.

(D) Before remanufacturing, store the hazardous spent solvents in tanks or containers that meet the technical standards R 299.9233(1) and (2), with the tanks and containers being labeled or otherwise having immediately available record of the material being stored.

(E) During remanufacturing, and during storage of the hazardous secondary material before 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 parts 60, 61, or 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 40 CFR part 261, subparts AA, BB, and CC.

(F) Meet the requirements prohibiting speculative accumulation under R 299.9107.

(dd) Hazardous secondary material that is exported from the United States and reclaimed at a reclamation facility located in a foreign country is not a waste if the hazardous secondary material generator complies with the applicable requirements of paragraphs (i)-(v) of subdivision (bb) of this subrule, except subparagraph (B)(II) of paragraph (v) for foreign reclaimers and foreign intermediate facilities, and all of the following requirements:

(i) Provides notification to the EPA of an intended export before the hazardous secondary material is scheduled to leave the United States. A complete notification must be submitted at least 60 days before the initial shipment is intended to be shipped off-site. The notification may cover export activities extending over no more than a 12-month period. The notification must be in writing, signed by the hazardous secondary material generator, and include all of the following information:

(A) The name, mailing address, telephone number, and site identification number, if applicable, of the hazardous secondary material generator.

(B) A description of the hazardous secondary material and the hazardous waste number that would apply if the hazardous secondary material was managed as a hazardous waste and the DOT proper shipping name, hazard class, and ID number (UN/NA) for each hazardous secondary material as identified in 49 CFR parts 171 to 177.

(C) The estimated frequency or rate at which the hazardous secondary material is to be exported and the period of time over which the material is to be exported.

(D) The estimated total quantity of hazardous secondary material.

(E) All points of entry to and departure from each foreign country through which the hazardous secondary material will pass.

(F) A description of the means by which each shipment of hazardous secondary material will be transported, including the mode of transportation vehicle and the types of containers.

(G) A description of the manner in which the hazardous secondary material will be reclaimed in the country of import.

(H) The name and address of the reclaimer, any intermediate facility, and any alternate reclaimer and intermediate facilities.

(I) The name of any countries of transit through which the hazardous secondary material will be sent and a description of the approximate length of time it will remain in the countries and the nature of its handling while there. For the purposes of this provision, the terms "EPA Acknowledgment of Consent," "country of import," and "country of transit" have the same meanings as defined in 40 CFR 262.81, with the exception that the terms in this subparagraph refer to hazardous secondary materials, rather than hazardous waste.

(ii) Notifications must be submitted electronically using the WIETS, or its successor system.

(iii) Except for changes to the telephone number in subparagraph (A) of paragraph (i) of this subdivision and decreases in the quantity of hazardous secondary material indicated under subparagraph (D) of paragraph (i) of this subdivision, when the conditions specified on the original notification change, including any exceedance of the estimate of the quantity of hazardous secondary material specified in the original notification, the hazardous secondary material generator shall provide the EPA with written renotification of the change. The shipment cannot take place until consent of the country of import to the changes and in the ports of entry to and departure from countries of transit has been obtained and the hazardous secondary material generator receives from the EPA an Acknowledgment of Consent reflecting the country of import's consent to the changes.

(iv) Upon request by the EPA, the hazardous secondary material generator shall furnish to the EPA any additional information which a country of import requests to respond to a notification.

(v) The EPA shall provide a complete notification to the country of import and any countries of transit. A notification is complete when the EPA receives a notification that the EPA determines satisfies the requirements of paragraph (i) of this subdivision. If a claim of confidentiality is asserted with respect to any notification information required by paragraph (i) of this subdivision, the EPA may find the notification not complete until the claim is resolved under 40 CFR 260.2.

(vi) The export of hazardous secondary material under this subdivision is prohibited unless the country of import consents to the intended import. When the country of import consents in writing to the receipt of the hazardous secondary material or withdraws a prior consent, the EPA shall notify the hazardous secondary material generator in writing. The EPA shall also notify the hazardous

secondary material generator of any responses from the countries of transit.

(vii) For exports to OECD member countries, the receiving country may respond to the notification using tacit consent. If no objection has been lodged by any country of import or any country of transit to a notification provided under to paragraph (i) of this subdivision within 30 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. In such cases, the EPA shall send an Acknowledgment of Consent to inform the hazardous secondary material generator that the country of import and any relevant countries of transit have not objected to the shipment and are therefore presumed to have consented tacitly. Tacit consent expires 1 calendar year after the close of the 30-day period. Renotification and renewal of all consents is required for exports after that date.

(viii) A copy of the EPA Acknowledgement of Consent must accompany the shipment. The shipment must conform to the terms of the Acknowledgement of Consent.

(ix) If a shipment cannot be delivered for any reason to the reclaimer, intermediate facility, or the alternate reclaimer or alternate intermediate facility, the hazardous secondary material generator shall re-notify the EPA of a change in the conditions of the original notification to allow shipment to a new reclaimer in accordance with paragraph (iii) of this subdivision and obtain another EPA Acknowledgement of Consent.

(x) Hazardous secondary material generators shall keep a copy of each notification of intent to export and each EPA Acknowledgement of Consent for a period of not less than 3 years from the date of receipt of the EPA Acknowledgement of Consent. This recordkeeping requirement may be satisfied by retaining electronically submitted notifications or electronically generated Acknowledgements of Consent in the generator's account on WIETS, provided the copies are readily available for viewing and production if requested by any EPA or authorized state inspector. A hazardous secondary material generator may not be held liable for the inability to produce a notification or Acknowledgment of Consent for inspection under this paragraph if the generator can demonstrate that the inability to produce the copies are due exclusively to technical difficulty with WIETS for which the generator bears no responsibility.

(xi) Hazardous secondary material generators shall file with the EPA no later than March 1 of each year, a report summarizing the types, quantities, frequency, and ultimate destination of all hazardous secondary materials exported during the previous calendar year. Annual reports must be submitted electronically using WIETS. The reports must include all of the following information:

(A) The name, mailing and site addresses, and site identification number, if applicable, of the hazardous secondary material generator.

(B) The calendar year covered by the report.

(C) The name and site address of each reclaimer and intermediate facility.

(D) Organized by reclaimer and intermediate facility, for each hazardous secondary material exported, a description of the material and the hazardous waste number that would apply if the material was managed as a hazardous waste, the DOT hazard class, the name and site identification number, if applicable, for each transporter used, the total amount material shipped, and the number of shipments under each notification.

(E) A certification signed by the hazardous secondary material generator 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."

(xii) All persons claiming an exclusion under this subdivision shall provide notification as required by 40 CFR 260.42.

(2) The following wastes are not hazardous wastes for the purposes of part 111 of the act,

MCL 324.11101 to 324.11153, and these rules:

(a) Household waste, including household waste that has been collected, transported, stored, treated, disposed of, recovered, or reused. Household waste means any waste material, including garbage, trash, and sanitary wastes in septic tanks, that is 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 that manages municipal waste is not considered to be treating, storing, disposing of, or otherwise managing hazardous wastes for regulation under these rules if the facility is in compliance with both of the following provisions:

(i) Receives and burns only household waste from single and multiple dwellings, hotels, motels, and other residential sources and waste from commercial or industrial sources that does not contain hazardous waste.

(ii) Does not accept hazardous wastes and the owner or operator of the facility has established contractual requirements or other appropriate notification or inspection procedures to assure that hazardous wastes are not received at or burned in the facility.

(b) Wastes that are generated by either of the following and that are returned to the soil as fertilizers:

(i) The growing and harvesting of agricultural crops.

(ii) The raising of animals, including animal manures.

(c) Mining overburden that is returned to the mine site.

(d) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste that is generated primarily from the combustion of coal or other fossil fuels, except as provided by 40 CFR 266.112 for facilities that burn or process hazardous waste.

(e) The following wastes that are generated primarily from processes that support the combustion of coal or other fossil fuels that are co-disposed with the wastes in subdivision (d) of this subrule, except as provided by 40 CFR 266.112 for facilities that burn or process hazardous waste:

(i) Coal pile run-off. For the purpose of subdivision (d) of this subrule, coal pile run-off means any precipitation that drains off of coal piles.

(ii) Boiler cleaning solutions. For the purposes of subdivision (d) of this subrule, boiler cleaning solutions means water solutions and chemical solutions used to clean the fire-side and water-side of the boiler.

(iii) Boiler blowdown. For the purposes of subdivision (d) of this subrule, boiler blowdown means water purged from boilers used to generate steam.

(iv) Process water treatment and demineralizer regeneration wastes. For the purposes of subdivision (d) of this subrule, 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.

(v) Cooling tower blowdown. For the purposes of subdivision (d) of this subrule, cooling tower blowdown means water purged from a closed cycle cooling system. Closed cycle cooling systems include cooling towers, cooling ponds, or spray canals.

(vi) Air heater and precipitator washes. For the purposes of subdivision (d) of this subrule, air heater and precipitator washes means wastes from cleaning air preheaters and electrostatic precipitators.

(vii) Effluents from floor and yard drains and sumps. For the purposes of subdivision (d) of this subrule, 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.

(viii) Wastewater treatment sludges. For the purposes of subdivision (d) of this subrule, wastewater treatment sludges means sludges that are generated from the treatment of wastewaters specified in paragraphs (i) to (vi) of this subdivision.

(f) Drilling fluids, produced waters, and other wastes that are associated with the exploration, development, or production of crude oil, natural gas, or geothermal energy.

(g) Wastes that fail the test for the toxicity characteristic because chromium is present or wastes that are listed in R 299.9213 or R 299.9214 due to the presence of chromium, that 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 that do not fail the test for any other characteristic, if it is shown by a waste generator or by waste generators that all of the following provisions are met:

(i) The chromium in the waste is exclusively, or nearly exclusively, trivalent chromium.

(ii) The waste is generated from an industrial process that uses trivalent chromium exclusively, or nearly exclusively, and the process does not generate hexavalent chromium.

(iii) The waste is typically and frequently managed in nonoxidizing environments.

(h) The specific wastes that meet the standards in subdivision (g) of this subrule, if the wastes do not fail the test for the toxicity characteristic for any other constituent and do not fail the test for any other characteristic, include the following:

(i) Chrome (blue) trimmings generated by any of the following subcategories of the leather tanning and finishing industry:

(A) Hair pulp/chrome, tan/retan/wet finish.

(B) Hair save/chrome, tan/retan/wet finish.

(C) Retan/wet finish.

(D) No beam houses.

(E) Through-the-blue.

(F) Shearling.

(ii) Chrome (blue) shavings generated by any of the following subcategories of the leather tanning and finishing industry:

(A) Hair pulp/chrome, tan/retan/wet finish.

(B) Hair save/chrome, tan/retan/wet finish.

(C) Retan/wet finish.

(D) No beam house.

(E) Through-the-blue.

(F) Shearling.

(iii) Buffing dust generated by any of the following subcategories of the leather tanning and finishing industry:

(A) Hair pulp/chrome, tan/retan/wet finish.

(B) Hair save/chrome, tan/retan/wet finish.

(C) Retan/wet finish.

(D) No beamhouse.

(E) Through-the-blue.

(iv) Sewer screenings generated by any of the following subcategories of the leather tanning and finishing industry:

(A) Hair pulp/chrome, tan/retan/wet finish.

(B) Hair save/chrome, tan/retan/wet finish.

(C) Retan/wet finish.

(D) No beamhouse.

(E) Through-the-blue.

(F) Shearling.

(v) Wastewater treatment sludges generated by any of the following subcategories of the leather tanning and finishing industry:

(A) Hair pulp/chrome, tan/retan/wet finish.

(B) Hair save/chrome, tan/retan wet finish.

(C) Retan/wet finish.
(D) No beamhouse.
(E) Through-the-blue.
(F) Shearling.
(vi) Wastewater treatment sludges generated by any of the following subcategories of the leather tanning and finishing industry:
(A) Hair pulp/chrome, tan/retan/wet finish.
(B) Hair save/chrome, tan/retan/wet finish.
(C) Through-the-blue.
(vii) Waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other leather product manufacturing industries, including waste scrap leather from automotive seat design activities.
(viii) Wastewater treatment sludges from the production of Ti02 pigment using chromium-bearing ores by the chloride process.
(ix) Ink generated by the USPS in its automated facer canceled systems.
(x) Boiler chemical cleaning waste from electric utility boiler maintenance using water and tetra ammonium ethylene diamine tetra acetic acid, which is also known as ammoniated EDTA.
(i) 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 in 40 CFR 266.112 for facilities that burn or process hazardous waste. For purposes of this subdivision, the following provisions apply:
(i) Beneficiation of ores and minerals is restricted to the following activities: crushing; grinding; washing; dissolution; crystallization; filtration; sorting; sizing; drying; sintering; pelletizing; briqueting; calcining to remove water or carbon dioxide, or both; roasting, autoclaving, or chlorination, or any combination thereof, in preparation for leaching, except where the roasting/leaching or autoclaving/leaching 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) Waste from the processing of ores and minerals must include 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) Residues derived from co-processing mineral processing secondary materials with normal beneficiation raw materials or with normal mineral processing raw materials remain excluded under subrule (2) of this rule if the owner or operator meets both of the following requirements:
(A) Processes at least 50% by weight normal beneficiation raw materials or normal mineral processing raw materials.
(B) Legitimately reclaims the secondary mineral processing materials.
(j) Mixtures of a waste that is excluded from regulation under subdivision (i) of this sub rule and any other waste that exhibits a hazardous waste characteristic under R 299.9212 and that is not listed under R 299.9213 or R 299.9214, such that the resultant mixture does not exhibit any hazardous waste characteristic that would have been exhibited by the non-excluded waste alone if the mixture had not occurred.
(k) Cement kiln dust waste, except as provided in 40 CFR 266.112 for facilities that burn or process hazardous waste.
(l) Waste that consists of discarded arsenical-treated wood or wood products, that fails the test for the toxicity characteristic for hazardous waste numbers D004 through D017 and that 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.
(m) Petroleum-contaminated media and debris that fail the test for the toxicity characteristic under R 299.9212 for hazardous waste numbers D018 through D043 only and are subject to the corrective action regulations under 40 CFR part 280.
(n) 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, if the refrigerant is reclaimed for further use.
(o) Non-terne plated used oil filters that are not mixed with wastes that are identified in R 299.9213 or R 299.9214, or both, if the oil filters have been gravity hot-drained using 1 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.
(iv) Any other equivalent hot-draining method that will remove used oil.
(p) Leachate or gas condensate collected from landfills where certain wastes have been disposed of if all of the following requirements are met:
(i) The wastes disposed would meet 1 or more of the listing descriptions for hazardous waste numbers 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 wastes described in paragraph (i) of this subdivision were disposed before the effective date of the listing.
(iii) The leachate or gas condensate do not exhibit any characteristic of a hazardous waste and are not derived from any other listed hazardous waste.
(iv) The discharge of the leachate or gas condensate, including leachate or gas condensate transferred from the landfill to a publicly owned treatment works by truck, rail, or dedicated pipe, is subject to regulations under section 307(b) or 402 of the federal clean water act, 33 USC 1317 or 1342.
(v) As of February 13, 2001, leachate or gas condensate derived from K169, K170, K171, and K172 is no longer exempt if it is stored or managed in a surface impoundment before discharge. As of

November 21, 2003, leachate or gas condensate derived from K176, K177, or K178 is no longer exempt if it is stored or managed in a surface impoundment before discharge. After February 26, 2007, leachate or gas condensate derived from K181 is no longer exempt if it is stored or managed in a surface impoundment before discharge unless the surface impoundment meets both of the following requirements:

(A) The surface impoundment is used to temporarily store leachate or gas condensate in response to an emergency situation.

(B) The surface impoundment has a double liner, and the leachate or gas condensate is removed from the impoundment and continues to be managed in compliance with the conditions of this subdivision after the emergency ends.

(q) Solvent-contaminated wipes, except for wipes that are hazardous waste due to the presence of trichloroethylene, that are sent for disposal are not hazardous waste at the point of generation if all of the following requirements are met:

(i) The wipes, when accumulated, stored, and transported, are contained in non-leaking, closed containers that are labeled "Excluded Solvent-Contaminated Wipes." The containers must be able to contain free liquids, if free liquids occur. During accumulation, a container is considered closed if there is complete contact between the fitted lid and the rim, except when it is necessary to add or remove wipes. If the container is full, the wipes are no longer being accumulated, or the container is being transported, the container must 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 wipes must not be accumulated by the generator for more than 180 days from the start date of accumulation for each container before being sent for disposal.

(iii) At the point of being transported for disposal, the wipes contain no free liquids.

(iv) Free liquids removed from the wipes or from the container holding the wipes must be managed in accordance with these rules.

(v) Generators shall maintain at their site all of the following:

(A) The name and address of the landfill or combustor that is receiving the wipes.

(B) Documentation that the 180-day accumulation time limit in paragraph (ii) of this subdivision is being met.

(C) A description of the process the generator is using to ensure that the wipes contain no free liquids at the point of being transported for disposal.

(vi) The wipes are sent for disposal to any of the following:

(A) A municipal solid waste landfill regulated under part 115 of the act, MCL 324.11501 to 324.11554.

(B) A municipal solid waste landfill regulated under 40 CFR part 258, including 40 CFR 258.40.

(C) A hazardous waste landfill regulated under these rules.

(D) A hazardous waste landfill regulated under 40 CFR part 264 or 265.

(E) A municipal waste combustor or other combustion facility regulated under section 129 of the clean air act, 42 USC 7429.

(F) A hazardous waste combustor, boiler, or industrial furnace regulated under these rules.

(G) A hazardous waste combustor, boiler, or industrial furnace regulated under 40 CFR part 264, 265, or 266, subpart H.

(3) The following hazardous wastes are not subject to regulation under parts 3 to 10 of these rules:

(a) A hazardous waste that 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 a manufacturing process unit or an associated nonwaste treatment manufacturing unit. This exemption does not apply in any of the following circumstances:

(i) Once the waste exits the unit in which it was generated.

(ii) If the unit is a surface impoundment.

(iii) If the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for the manufacturing, storage, or transportation of product or raw materials.

(b) Waste pesticides and pesticide residues that are generated by a farmer from his or her own use and that are hazardous wastes if the pesticide residues are disposed of on the farmer's own farm in a manner that is consistent with the disposal instructions on the pesticide container label and if the farmer empties or cleans each pesticide container under R 299.9207.

(4) Except as provided in subrule (5) of this rule, a sample of waste or a sample of water, soil, or air that is collected for the sole purpose of testing to determine its characteristics or composition is not subject to part 111 of the act, MCL 324.11101 to 324.11153, and these rules if the following provisions are met:

(a) The sample meets 1 of the following provisions:

(i) The sample is being transported to a laboratory for the purpose of testing.

(ii) The sample is being transported back to the sample collector after testing.

(iii) The sample is being stored by the sample collector before transport to a laboratory for testing.

(iv) The sample is being stored in a laboratory before testing.

(v) The sample is being stored in a laboratory after testing but before it is returned to the sample collector.

(vi) The sample is being stored temporarily in the laboratory after testing for a specific purpose, such as until conclusion of a court case or enforcement action where further testing of the sample might be necessary.

(b) A sample collector that ships samples to a laboratory and a laboratory that returns samples to a sample collector shall comply with DOT, USPS, or any other applicable shipping requirements. The sample collector shall only ship a volume that is necessary for testing and analysis and, if the sample collector determines that DOT, USPS, or other shipping requirements do not apply to the shipment of the sample, the sample collector shall package the sample so that it does not leak, spill, or vaporize from its packaging and ensure that all of 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.

(v) A description of the sample.

(c) The mass of a sample that will be exported to a foreign laboratory or that will be imported to a U.S. laboratory from a foreign source does not exceed 25 kilograms.

(5) The exemption specified in subrule (4) of this rule does not apply if the laboratory determines that the waste is hazardous but the laboratory is no longer in compliance with any of the conditions in subdivision (a) of subrule (4) of this rule.

(6) Persons who generate or collect samples for the purpose of conducting treatability studies are not subject to the requirements of parts 2, 3, and 4 of these rules or the notification requirements of section 3010 of RCRA, 42 USC 6930, and the samples are not included in the quantity determinations specified in R 299.9303 when the sample is being collected and prepared for transportation by the generator or sample collector, the sample is being accumulated or stored by the generator or sample collector before transportation to a laboratory or testing facility, or the sample is being transported to a laboratory or testing facility for the purpose of conducting a treatability study. The exemption specified in this subrule is applicable to samples of hazardous waste that are being collected and shipped for the purpose of conducting treatability studies if all of the following provisions are met:

(a) The generator or sample collector does not use more than 10,000 kilograms of media that is contaminated with nonacute hazardous waste, 1,000 kilograms of any nonacute hazardous waste other than contaminated media, 1 kilogram of acute or severely toxic hazardous waste, or

2,500 kilograms of media that is contaminated with acute or severely toxic hazardous waste for each process that is being evaluated for each generated waste stream in a treatability study.

(b) The mass of each sample shipment is not more than 10,000 kilograms. The 10,000-kilograms quantity may be all media contaminated with nonacute hazardous waste or may include 2,500 kilograms of media contaminated with acute or severely toxic hazardous waste, 1,000 kilograms of nonacute hazardous waste, and 1 kilogram of acute or severely toxic hazardous waste.

(c) The sample must be packaged and transported so that it will not leak, spill, or vaporize from its packaging during shipment and so that either of the following requirements are met:

(i) The transportation of each sample shipment is in compliance with DOT, USPS, or any other applicable shipping requirements.

(ii) If the DOT, USPS, or other shipping requirements do not apply to the shipment of the sample, all of the following information must accompany the sample:

(A) The name, mailing address, and telephone number of the originator of the sample.

(B) The name, address, and telephone number of the facility that will perform the treatability study.

(C) The quantity of the sample.

(D) The date of the shipment.

(E) A description of the sample, including its hazardous waste number.

(d) The sample is shipped to a laboratory or testing facility that is exempt under subrule (9) of this rule or has an appropriate RCRA permit, state hazardous waste operating license, or interim status.

(e) The generator or sample collector maintains all of the following records for 3 years after completion of the treatability study:

(i) Copies of the shipping documents.

(ii) A copy of the contract with the facility that conducts the treatability study.

(iii) Documentation that shows all of the following information:

(A) The amount of waste that is shipped under this exemption.

(B) The name, address, and site identification number of the laboratory or testing facility that received the waste.

(C) The date the shipment was made.

(D) If unused samples and residues were returned to the generator.

(f) The generator reports the information required under subdivision (e)(iii) of this subrule as part of the data referenced in R 299.9312(1).

(g) The mass of a sample that will be exported to a foreign laboratory or that will be imported to a U.S. laboratory from a foreign source does not exceed 25 kilograms.

(7) The director may grant requests on a case-by-case basis for up to an additional 2 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 subrules (6)(a) and (b) and (9)(d) of this rule for up to an additional 5,000 kilograms of media contaminated with nonacute hazardous waste, 500 kilograms of nonacute hazardous waste, 2,500 kilograms of media contaminated with acute or severely toxic hazardous waste, and 1 kilogram of acute or severely toxic hazardous waste. A request may be granted in response to 1 or both of the following requests:

(a) A request for authorization to ship, store, and conduct treatability studies on, additional quantities in advance of commencing treatability studies. The director shall consider all of the following factors in determining whether to grant the request:

(i) The nature of the technology.

(ii) The type of process.

(iii) The size of the unit undergoing testing, particularly in relation to scale-up considerations.

(iv) The time and quantity of material required to reach steady state operating conditions.

(v) Test design considerations such as mass balance calculations.

(b) A request for authorization to ship, store, and conduct treatability studies on, additional quantities after initiation or completion of initial treatability studies when any of the following occur:

(i) There has been an equipment or mechanical failure during the conduct of a treatability study.

(ii) There is a need to verify the results of a previously conducted treatability study.

(iii) There is a need to study and analyze alternative techniques within a previously evaluated treatment process.

(iv) There is a need to do further evaluation of an ongoing treatability study to determine final specifications for treatment.

(8) The additional quantities and time frames allowed under subrule (7) of this rule are subject to this rule. The generator or sample collector shall apply to the director and shall provide, in writing, all of the following information:

(a) The reason why the generator or sample collector requires an additional quantity of the sample or time for the treatability study evaluation and the additional quantity or time needed.

(b) Documentation accounting for all samples of hazardous waste from the waste stream that have been sent for or undergone treatability studies, including all of the following information:

(i) The date that each previous sample from the waste stream was shipped.

(ii) The sample quantity of each previous shipment.

(iii) The laboratory or testing facility to which the sample was shipped.

(iv) What treatability study processes were conducted on each sample shipped.

(v) The available results of each treatability study.

(c) A description of the technical modifications or change in specifications that will be evaluated and the expected results.

(d) If further study is being required due to equipment or mechanical failure, then the applicant must include information regarding the reason for the failure and also include a description of what procedures were established, or what equipment improvements have been made, to protect against further equipment or mechanical failure.

(e) Other information that the director considers necessary.

(9) Samples that undergo treatability studies and the laboratory or testing facility that conducts the treatability studies, to the extent the facilities are not otherwise subject to the requirements of part 111 of the act, MCL 324.11101 to 324.11153, or these rules, are not subject to any of the requirements of these rules or to the notification requirements of section 3010 of RCRA, 42 USC 6930, if the conditions of this subrule are met. A mobile treatment unit may qualify as a testing facility subject to this subrule. If a group of mobile treatment units is located at the same site, then the limitations specified in this subrule apply to the entire group of mobile treatment units collectively as if the group were 1 mobile treatment unit. The conditions are as follows:

(a) Not less than 45 days before conducting treatability studies, the facility shall notify the director, in writing, that it intends to conduct treatability studies under this rule.

(b) The laboratory or testing facility that conducts the treatability study has a site identification number.

(c) Not more than a total of 10,000 kilograms of "as received" media contaminated with nonacute hazardous waste, 2,500 kilograms of media contaminated with acute or severely toxic hazardous waste, or 250 kilograms of other "as received" hazardous waste is subjected to the initiation of treatment in all treatability studies in any single day. "As received" hazardous waste refers to waste as received in the shipment from the generator or sample collector.

(d) The quantity of "as received" hazardous waste that is stored at the facility for evaluation in treatability studies is not more than 10,000 kilograms, the total of which may include 10,000 kilograms of media contaminated with nonacute hazardous waste, 2,500 kilograms of media contaminated with acute or severely toxic hazardous waste, 1,000 kilograms of nonacute hazardous waste other than contaminated media, and 1 kilogram of acute or severely toxic hazardous waste.

The quantity limitation does not include treatment materials, including nonhazardous waste, that are added to "as received" hazardous waste.

(e) Not more than 90 days have elapsed since the treatability study for the sample was completed, or not more than 1 year, or 2 years for treatability studies involving bioremediation, has elapsed since the generator or sample collector shipped the sample to the laboratory or testing facility, whichever date occurs first.

(f) The treatability study does not involve the placement of hazardous waste on the land or the open burning of hazardous waste.

(g) The facility maintains records, for 3 years following completion of each study, that show compliance with the treatment rate limits, storage time, and quantity limits. All of the following specific information must be included for each treatability study that is conducted:

(i) The name, address, and site 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 site identification number.

(h) 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 3 years from the completion date of each treatability study.

(i) The facility prepares and submits a report to the director by March 15 of each year that includes all of the following information for the previous calendar year:

(i) The name, address, and site 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 site identification numbers.

(iv) The total quantity of waste in storage each day.

(v) The total 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.

(j) The facility determines if any unused sample or residues generated by the treatability study are hazardous waste under R 299.9203 and, if so, are subject to these rules, unless the residues and unused samples are returned to the sample originator under the exemption in subrule (6) of this rule.

(k) The facility notifies the director, by letter, when the facility is no longer planning to conduct any treatability studies at the site.

(10) The disposal of PCB-containing dielectric fluid and electric equipment that contains the fluid as authorized for use and as regulated under 40 CFR part 761 and fluid and equipment that are hazardous only because they fail the test for the toxicity characteristic for hazardous waste numbers D018 through D043 are not subject to regulation under parts 2 to 7 and 9 and 10 of these rules.

(11) Dredged material, as defined in 40 CFR 232.2, that is subject to the requirements of a permit that has been issued under section 404 of the federal clean water act, 33 USC 1344, or section 103 of the marine protection, research, and sanctuaries act of 1972, 33 USC 1413, is not a hazardous waste for the purposes of part 111 of the act, MCL 324.11101 to 324.11153, and these rules. For the

purposes of this exemption, "permit" means any of the following:

(a) A permit issued by the U.S. Army Corps of Engineers or an approved state under section 404 of the federal clean water act, 33 USC 1344.

(b) A permit issued by the U.S. Army Corps of Engineers under section 103 of the marine protection, research, and sanctuaries act of 1972, 33 USC 1413.

(c) In the case of U.S. Army Corps of Engineers civil works projects, the administrative equivalent of the permits referred to in subdivisions (a) and (b) of this subrule, as provided for in the U.S. Army Corps of Engineers regulations.

(12) Carbon dioxide streams that are captured and transported for the purposes of injection into an underground injection well subject to the requirements for class VI underground injection control wells, including the requirements of 40 CFR parts 144 and 146 of the underground injection control program of act 399, are not a hazardous waste if all of the following requirements are met:

(a) Transportation of the carbon dioxide stream must comply with all of the following DOT requirements:

(i) The pipeline safety laws under 49 USC 60101 to 60141.

(ii) The pipeline safety regulations under 49 CFR parts 190 to 199.

(iii) The pipeline safety regulations adopted and administered by a state authority under a certification under 49 USC 60105, as applicable.

(b) Injection of the carbon dioxide stream must comply with the applicable requirements for class VI underground injection control wells, including the applicable requirements of 40 CFR parts 144 and 146.

(c) No hazardous waste is mixed with, or otherwise co-injected with, the carbon dioxide stream.

(d) Any generator of a carbon dioxide stream who claims that a stream is excluded under this subrule shall sign, or have an authorized representative sign, a certification statement worded in accordance with 40 CFR 261.4(h)(4)(i).

(e) Any class VI underground injection control well owner or operator who claims that a carbon dioxide stream is excluded under this subrule shall sign, or have an authorized representative sign, a certification statement worded in accordance with 40 CFR 261.4(h)(4)(ii).

(f) The signed certification statements referenced in subdivisions (d) and (e) of this subrule must be kept on-site for not less than 3 years. The statements must be made available within 72 hours of a written request from the director. The statements must be renewed every year that the exclusion is claimed by having the generator or the owner or operator, or their authorized representative, annually prepare and sign a new copy of the statement within 1 year of the date of the previous statement. The statements must also be readily accessible on the generator and owner or operator's publicly-available website, if one exists, as a public notification with the title of "Carbon Dioxide Stream Certification" when the exclusion is claimed.

(13) 40 CFR 261.4(h)(4)(i) and (ii), part 144, part 146, part 280, and part 761 and 49 CFR parts 190 to 199 are adopted by reference in R 299.11003 and R 299.11004.

R 299.9205 Rescinded.

R 299.9206 Requirements for recyclable materials.

Rule 206. (1) Except as provided in subrules (2) to (6) of this rule, recyclable materials are subject to all of the following requirements:

(a) Generators and transporters of recyclable materials are subject to the applicable requirements of parts 3 and 4 of these rules.

(b) Owners or operators of facilities that store recyclable materials before they are recycled are regulated under all applicable provisions of parts 5, 6, 7, and 8 of these rules. The recycling process itself is exempt from regulation, except as provided in subdivision (d) of this subrule.

(c) Owners or operators of facilities that recycle recyclable materials without storing them before they are recycled are subject to the identification number requirements of 40 CFR 264.11, the manifest requirements of R 299.9608, and the reporting requirements of R 299.9610. The recycling process itself is exempt from regulation, except as provided in subdivision (d) of this subrule.

(d) A hazardous waste management unit in which recyclable materials are recycled is subject to the requirements of 40 CFR part 265, subparts AA and BB if the unit is located at a facility that is described in R 299.9601(3)(a) or (b), or the requirements of R 299.9630 and R 299.9631 if the unit is located at a facility subject to the licensing requirements specified in part 111 of the act, MCL 324.11101 to 324.11153, and part 5 of these rules.

(2) The following recyclable materials are not subject to the requirements of this rule, but are regulated under the applicable provisions of parts 5 and 8 of these rules:

(a) Recyclable materials used in a manner that constitutes disposal.

(b) Hazardous wastes burned for energy recovery in boilers and industrial furnaces that are not regulated as incinerators under part 6 of these rules.

(c) Recyclable materials from which precious metals are reclaimed.

(d) Spent lead-acid batteries that are being reclaimed.

(3) The following recyclable materials are not subject to regulation under part 111 of the act, MCL 324.11101 to 324.11153, or these rules, except for the environmental and human health standards of R 299.9602 and R 299.9809 to R 299.9816, as applicable:

(a) Industrial ethyl alcohol that is reclaimed except that exports and imports of the recyclable materials must comply with the requirements of R 299.9314.

(b) Scrap metal that is not excluded under R 299.9204(1)(p).

(c) Fuels produced from the refining of oil-bearing hazardous wastes together with normal process streams at a petroleum refining facility if the 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, if the recovered oil is already excluded under R 299.9204(1)(l).

(d) Hazardous waste fuel that is produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices or that is produced from oil that is reclaimed from the hazardous wastes, if the hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil if the resulting fuel is in compliance with the used oil specification in R 299.9809(1)(f) and if other hazardous wastes are not used to produce the hazardous waste fuel.

(e) Hazardous waste fuel that is produced from oil-bearing hazardous waste that results from petroleum refining production and transportation practices if the hazardous wastes are reintroduced into a refining process after a point at which contaminants are removed and if the fuel is in compliance with the used oil fuel specification in R 299.9809(1)(f).

(f) Oil that is reclaimed from oil-bearing hazardous wastes that result from petroleum refining, production, and transportation practices, which reclaimed oil is burned as a fuel without reintroduction to a refining process, if the reclaimed oil is in compliance with the used oil fuel specification in R 299.9809(1)(f).

(g) Textiles, including gloves, uniforms, linens, and wipes, that are being recycled in a manner other than being burned for energy recovery or used in a manner constituting disposal if both of the following conditions are met:

(i) After the textile's original use, hazardous waste is not mixed with the textile.

(ii) The textiles and the containers used to transport the textiles do not contain any free liquids.

(4) Used oil that is recycled and is also a hazardous waste solely because it exhibits a hazardous characteristic is not subject to regulation under part 111 of the act, MCL 324.11101 to 324.11153, or these rules, except for the environmental and human health standards in R 299.9602 and R 299.9809

to R 299.9816. Used oil that is recycled includes any used oil that is reused, after its original use, for any purpose. Used oil includes, but is not limited to, oil that is re-refined, reclaimed, burned for energy recovery, or reprocessed.

(5) An owner or operator of a facility that stores lamps that meet the definition of a hazardous waste before recycling the lamps at the facility shall comply with all of the following requirements:

(a) Submit a written notification of hazardous waste lamp storage activity to the director. The notification must include all of the following information:

(i) The name, mailing address, and telephone number of the owner.

(ii) The name, mailing address, and telephone number of the operator.

(iii) The name, mailing address, location, and telephone number of the recycle facility.

(iv) A description of the unit or units in which the lamps are managed on-site before recycling and a map that shows the location of the unit or units.

(b) Obtain an identification number for the facility from the director.

(c) The environmental and human health standards under R 299.9602.

(d) The location standards under R 299.9603.

(e) The facility design and operating standards under R 299.9604.

(f) The handling requirements of R 299.9228(4)(a).

(g) Ensure that facility personnel are trained with respect to proper hazardous waste handling and preparedness and prevention procedures and are familiar with the facility emergency procedures.

(h) If there is a fire, explosion, or other release of hazardous waste or hazardous waste constituents that could threaten human health or the environment, or if the owner or operator has knowledge that a spill has reached surface water or groundwater, then the owner or operator shall immediately notify the department's pollution emergency alerting system telephone number 800-292-4706, or the department's district office for the district in which the facility is located. The notification must include all of the following information:

(i) The name and telephone number of the person who is reporting the incident.

(ii) The name, address, telephone number, and identification number of the facility.

(iii) The date, time, and type of incident.

(iv) The name and quantity of the material or materials involved and released.

(v) The extent of injuries, if any.

(vi) The estimated quantity and disposition of recovered materials that resulted from the incident, if any.

(vii) An assessment of actual or potential hazards to human health or the environment.

(viii) The immediate response action taken.

(i) The area where the lamps are accumulated must be protected, as appropriate for the type of waste being stored, from weather, fire, physical damage, and vandals.

(j) Accumulation must be conducted so that fugitive emissions are not in violation of part 55 of the act, MCL 324.5501 to 324.5542.

(k) A written operating record must be maintained on-site by the owner or operator and must contain all of the following information:

(i) The quantity of lamps received on-site during the calendar year.

(ii) The quantity of lamps recycled at the facility during the calendar year.

(iii) The documentation necessary to demonstrate that the lamps are not being stored on-site for more than 1 year.

(l) The closure standards of 40 CFR 264.111 and 264.114.

(m) R 299.9614 if the lamps are being stored in containers and R 299.9615 if the lamps are being stored in tanks.

(n) The lamps must not be stored on-site for more than 1 year from the date that the owner or operator receives the lamps.

(o) Any hazardous waste that is generated from the lamp recycle operation is subject to 2 to 7 of these rules.

(6) Hazardous waste that is exported ~~to~~ or imported for the purpose of recovery is subject to the requirements of R 299.9314.

(7) 40 CFR 264.11, 264.111, and 264.114, and part 265, subparts AA and BB, are adopted by reference in R 299.11003.

R 299.9207 Residues of hazardous waste in empty containers.

Rule 207. (1) Any hazardous waste that remains in either an empty container or an inner liner which is removed from an empty container, as explained in subrules (3), (4), and (5) of this rule, is not subject to regulation pursuant to the provisions of parts 3 to 10 of these rules.

(2) Any hazardous waste in either a container that is not empty or an inner liner which is removed from a container that is not empty, as explained in subrule (3), (4), or (5) of this rule, is subject to regulation pursuant to these rules.

(3) A container or an inner liner which is removed from a container that has held any hazardous waste, except for a waste which is a compressed gas, which is identified as an acute hazardous waste listed in table 203a or 205a of this part, or which is a severely toxic hazardous waste, is empty if both of the following conditions are met:

(a) All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, such as pouring, pumping, and aspirating.

(b) Not more than 2.5 centimeters (1 inch) of residue remain on the bottom of the container or inner liner or either of the following conditions is met:

(i) Not more than 3% 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.

(ii) Not more than 0.3% by weight of the total capacity of the container remains in the container or inner liner if the container is more than 119 gallons in size.

(4) A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric.

(5) A container or an inner liner that is removed from a container which has held an acute hazardous waste that is listed in table 203a or 205a of this part or that is a severely toxic hazardous waste is empty if any of the following criteria are met:

(a) The container or inner liner has been triple rinsed using a solvent that is capable of removing the commercial chemical product or manufacturing chemical intermediate.

(b) The container or inner liner has been cleaned by another method that has been shown, in scientific literature or by tests conducted by the generator, to achieve equivalent removal.

(c) 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.

(d) In the case of a container or inner liner that has held a pharmaceutical formulation that is an acute hazardous waste listed solely for a hazardous waste characteristic and the formulation in the container or inner liner does not exhibit the characteristic for which the waste was listed, the container or inner liner is empty if the requirements of subrule (3) of this rule are met.

R 299.9208 Criteria for identifying characteristics of hazardous waste.

Rule 208. (1) The director shall identify and define a characteristic of hazardous waste in this part upon finding that the administrator has identified the characteristic based on the criteria contained in the provisions of 40 C.F.R. §261.10.

(2) The director shall identify and define a characteristic of hazardous waste in this part in addition to those identified by the administrator in the provisions of 40 C.F.R. part 261, subpart C, upon determining that the waste that exhibits the characteristic does either of the following:

(a) Exhibits extreme toxicity to aquatic life.

(b) Contains a substance which can statistically be shown to cause acutely toxic; carcinogenic; teratogenic; hereditary mutagenic; or severe, debilitating, irreversible, adverse effects to mammals when exposed, by oral, dermal, or inhalation route, once or repeatedly to levels of 100 parts per billion or less.

(3) The provisions of 40 C.F.R. §261.10 are adopted by reference in R 299.11003.

R 299.9209 Criteria and procedure for listing hazardous wastes.

Rule 209. (1) The director shall list a waste as a hazardous waste in this part upon finding that the administrator has listed the waste as hazardous based on the criteria contained in the provisions of 40 C.F.R. §261.11.

(2) The director shall evaluate a waste for listing as a hazardous waste in this part, in addition to the wastes listed by the administrator in the provisions of 40 C.F.R. part 261, subpart D, upon determining that the waste meets any of the following criteria:

(a) The waste meets a characteristic identified in R 299.9208.

(b) The waste, or a material that could be a constituent of the waste, is hazardous pursuant to the provisions of section 3 of part 111 of the act, but is not currently listed in this part.

(3) If information becomes available that indicates that a waste, or a material that may be a component of wastes, might meet any of the criteria of subrule (2) of this rule, then the director shall do the following:

(a) Evaluate the characteristics of the waste or material to verify its hazards.

(b) If the waste is determined to have hazardous characteristics, initiate rule change procedures as outlined in act 306 that will lead to the listing of the waste as hazardous. In addition, the director shall request the governor to petition the administrator to add the waste to the listings in the provisions of 40 C.F.R. part 261 pursuant to the authority of section 3001(c) of RCRA.

(4) As additional wastes are determined to be hazardous by the administrator and listed in the provisions of 40 C.F.R. part 261, the director shall initiate rule change procedures as outlined in act 306 to incorporate the wastes into these rules.

(5) The basis for listing the classes or types of waste specified in this part shall be designated by 1 or more of the following hazard codes:

(a) For ignitable waste, (I).

(b) For corrosive waste, (C).

(c) For reactive waste, (R).

(d) For toxicity characteristic waste, (E).

(e) For acute hazardous waste, (H).

(f) For toxic waste, (T).

(6) The constituents that were the basis for listing the waste as toxicity characteristic waste (E) or toxic waste (T) in R 299.9220 and R 299.9222 are identified in the provisions of 40 C.F.R. part 261, appendix VII.

(7) The provisions of 40 C.F.R. §261.11 and 40 C.F.R. part 261, appendix VII, are adopted by reference in R 299.11003.

R 299.9210 Removal from hazardous waste listings.

Rule 210. (1) A petition may be made to the director for removal from listing in this part any listed waste or hazardous waste constituent, except those determined by the administrator to be hazardous in the provisions of 40 C.F.R. part 261. The petition shall be accompanied by substantiating data and references taken from scientific literature which challenges the validity of the data which led to the waste or waste constituent listing. Data supplied shall be reviewed and evaluated by the director. If the petition is granted, rule change procedures, as outlined in act 306, shall be initiated for delisting of

the waste or constituent. If the petition is not granted, the director shall inform the generator of the reasons why within 180 days of receipt of such a petition.

(2) Pursuant to the provisions of 40 C.F.R. §§260.20 and 260.22, a petition may be made to the EPA to remove from listing those wastes or constituents listed in the provisions of 40 C.F.R. part 261. When wastes are removed from the listing in the provisions of 40 C.F.R. part 261 by the EPA, the director shall initiate rule change procedures, as outlined in section 28 of part 111 of the act, to remove those wastes from the listing in R 299.9203.

R 299.9211 Petitions to exclude waste produced at a particular facility.

Rule 211. (1) Any person seeking to exclude a waste at a particular generating facility from the lists in this part shall do the following:

(a) If the waste is listed in the provisions of 40 C.F.R. part 261, subpart D, contains a waste listed in subpart D, or is derived from a waste listed in subpart D and does not meet the criteria of paragraph (c) of this subrule, petition the administrator, under the provisions of 40 C.F.R. §§260.20 and 260.22, to exclude the waste at the particular generating facility from the lists. If the petition is granted by the administrator, the director shall do both of the following:

(i) Within 60 days of the redesignation by the administrator, request any information necessary to evaluate the petition.

(ii) Within 180 days of receiving all information necessary to evaluate the petition, redesignate the waste and impose any conditions on the redesignation necessary to protect human health and the environment.

(b) If the waste is listed in this part, but not listed in the provisions of 40 C.F.R. part 261, subpart D, petition the director to exclude the waste at the particular generating facility from the lists in the part. The petition shall include that information specified by the provisions of 40 C.F.R. §260.22(i) and shall demonstrate that either the waste does not contain hazardous constituents or that the waste does contain hazardous constituents, but is not capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed, considering the factors listed in the provisions of 40 C.F.R. §261.11(a)(3). After receiving a petition for an exclusion, the director shall do both of the following:

(i) Within 60 days of receiving a petition for an exclusion, request any information necessary to evaluate the petition.

(ii) Within 180 days of receiving all information necessary to evaluate the petition, either approve the petition with any conditions necessary to protect human health and the environment or deny the petition.

(c) If the waste is treated, stored, or disposed of as part of closure or partial closure of a treatment, storage, or disposal facility or if the waste is contaminated soil deemed hazardous under R 299.9203(1) or R 299.9214 due to its mixture with a hazardous waste, petition the director to exclude the waste at the particular facility from regulation under these rules. The petition shall contain that information specified in 40 C.F.R. §§260.20(b) and 260.22. After receiving a complete petition under subrule (3) of this rule, the director shall do all of the following:

(i) Make a tentative decision to grant or deny the petition based on the criteria specified in 40 C.F.R. §260.22.

(ii) Public notice the tentative decision and provide 30 days for public comment.

(iii) After evaluating all public comments, make a final decision on the petition. The director shall grant the petition if the criteria specified in 40 C.F.R. §260.22 are met.

(2) Noncompliance with any conditions imposed under subrule (1) of this rule or any change of constituents, physical state, conditions of the generating process, or other variation which would increase the hazardous characteristics of the waste is a basis for the director to amend or revoke the delisting under act 306.

(3) Wastes for which petitions are under consideration shall be managed as required by these rules until such time that a redesignation is granted.

(4) The provisions of 40 C.F.R. §§260.20, 260.22, 260.31, and 261.11(a)(3) are adopted by reference in R 299.11003, with the exception that the word "director" shall replace the word "administrator."

R 299.9212 Characteristics of hazardous waste.

Rule 212. (1) A waste exhibits the characteristic of ignitability and is identified by the hazardous waste number D001 if a representative sample of the waste has any of the following properties:

(a) It is a liquid, other than an aqueous solution produced by a kraft pulp or paper mill that contains less than 24% alcohol by volume or an aqueous solution that contains less than 24% alcohol, by volume, as defined by section 211.117(a)(5) to (7) of the Internal Revenue Code, 27 U.S.C. §211.117(a)(5) to (7), including distilled spirits, wine, and malt beverages, and has a flash point less than 60 degrees Centigrade (140 degrees Fahrenheit), as determined by any of the following test methods:

(i) A Pensky-Martens closed cup tester using the test method specified in ASTM standard D93-15a, which is adopted by reference in R 299.11001.

(ii) A setaflash closed cup tester using the test method specified in ASTM standard D3278-96, which is adopted by reference in R 299.11001.

(iii) A standard test method for flash point by continuously closed cup tester using the test method specified in ASTM standard D6450-12, which is adopted by reference in R 299.11001.

(iv) An equivalent test method approved by the director, or his or her designee, pursuant to procedures in R 299.9215.

(b) 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.

(c) It is an ignitable compressed gas as defined in 40 C.F.R. §261.21(a)(3) and meets the criteria specified therein.

(d) It is an oxidizer as defined in 49 C.F.R. §173.127, which is adopted by reference in R 299.11004.

(2) A waste exhibits the characteristic of corrosivity and is identified by the hazardous waste number D002 if a representative sample of the waste has either of the following properties:

(a) 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 the publication entitled "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," which is adopted by reference in R 299.11005.

(b) It is a liquid and corrodes steel (SAE 1020) at a rate of more than 6.35 mm (0.250 inch) per year at a test temperature of 55 degrees Centigrade (130 degrees Fahrenheit) as determined by method 1110A in the publication entitled "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," which is adopted by reference in R 299.11005.

(3) A waste exhibits the characteristic of reactivity and is identified by the hazardous waste number D003 if a representative sample of the waste has any of the following properties:

(a) It is normally unstable and readily undergoes violent change without detonating.

(b) It reacts violently with water.

(c) It forms potentially explosive mixtures with water.

(d) 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.

(e) It is a cyanide or sulfide-bearing waste that, 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.

(f) It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.

(g) It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

(h) It is a forbidden explosive as defined in 49 C.F.R. §173.54, or it meets the definition of a Division 1.1, 1.2, or 1.3 explosive as defined in 49 C.F.R. §§173.50 and 173.53, which are adopted by reference in R 299.11004.

(4) A waste, except manufactured gas plant waste, exhibits the toxicity characteristic if, using the toxicity characteristic leaching procedure, test Method 1311 in the publication entitled "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," which is adopted by reference in R 299.11005, the extract from a representative sample of the waste contains any of the contaminants listed by the administrator or the director and identified in table 201a of these rules at a concentration equal to or greater than the respective values given in the tables. If the waste contains less than 0.5% filterable solids, then the waste itself, after filtering using the methodology outlined in method 1311, is considered to be the extract for the purposes of this rule.

(5) A waste exhibits the characteristic of severe toxicity if the waste contains 1 part per million or more of a severely toxic substance listed in table 202.

(6) A hazardous waste that is identified by a characteristic in this rule shall be assigned every hazardous waste number that is applicable. The hazardous waste number or numbers shall be used in complying with the notification, recordkeeping, and reporting requirements of these rules. The hazardous waste numbers are as follows:

(a) For wastes determined to be hazardous pursuant to subrules (4) and (5) of this rule, the hazardous waste number listed in table 201a or table 202 of these rules.

(b) For a waste that exhibits the characteristic of ignitability, the hazardous waste number D001.

(c) For a waste that exhibits the characteristic of corrosivity, the hazardous waste number D002.

(d) For a waste that exhibits the characteristic of reactivity, the hazardous waste number D003.

(7) For the purposes of this rule, the director, or his or her designee, shall consider a sample that is obtained using any of the applicable sampling methods specified in 40 C.F.R. part 261, appendix I, which is adopted by reference in R 299.11003, to be a representative sample.

(8) The following test methods shall be used:

(a) For aflatoxin, the test methods in subsection 26, natural poisons, of the publication entitled "Official Methods of Analysis of the Association of Official Analytical Chemists," 13th edition, 1980, which is adopted by reference in R 299.11006.

(b) For chlorinated dibenzo-p-dioxins and chlorinated dibenzofurans in chemical wastes, including still bottoms, filter aids, sludges, spent carbon, and reactor residues, and in soil, EPA method 8280B or 8290A in the publication entitled "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," which is adopted by reference in R 299.11005.

(c) Alternate procedures as approved by the director or his or her designee.

(9) The provisions of 40 C.F.R. §261.21(a)(3) are adopted by reference in R 299.11003.

R 299.9213 Lists of hazardous wastes from nonspecific and specific sources.

Rule 213. (1) The following wastes are hazardous wastes unless excluded under R 299.9211:

(a) Wastes from nonspecific sources listed by the administrator and identified in table 203a of these rules.

(b) Wastes from specific sources listed by the administrator and identified in table 204a of these rules.

(2) Each hazardous waste that is listed in subrule (1) of this rule is assigned a hazardous waste number that precedes the name of the waste on the table in which it is listed. The number must be

used in complying with the notification requirements and the recordkeeping and reporting requirements of these rules.

(3) The EPA hazardous waste numbers F020, F021, F022, F023, F026, and F027 are subject to the exclusion limits for acutely hazardous wastes established in R 299.9304.

(4) For the purposes of the EPA hazardous waste numbers F037 and F038 listings, aggressive biological treatment units are defined as those units that employ 1 of the following 4 treatment methods:

(a) Activated sludge.

(b) Trickling filter.

(c) Rotating biological contactor for the continuous accelerated biological oxidation of wastewaters.

(d) 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 and enhance biological activity. High-rate aeration systems must be composed of units that employ a minimum of 6 horsepower per million gallons of treatment volume and either the hydraulic retention time of the unit is no longer than 5 days, or the hydraulic retention time is no longer than 30 days and the unit does not generate a sludge that is hazardous waste by the toxicity characteristic.

(5) Generators and facility owners and operators shall demonstrate that their sludges are not subject to being listed as F037 or F038, or both, wastes under subrule (4) of this rule. Generators and facility owners and operators shall maintain, in their operating or other on-site records, documents and data sufficient to demonstrate that the unit is an aggressive biological treatment unit as defined in subrule (4) of this rule and that the sludges sought to be exempted from the definitions of F037 or F038, or both, wastes were actually generated in the aggressive biological treatment unit.

(6) For the purposes of the EPA hazardous waste number 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.

(7) For the purposes of the EPA hazardous waste number F038 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, and floats are considered to be generated at the moment they are formed in the top of the unit.

R 299.9214 Discarded commercial chemical products, off-specification species, containers, container residues, and spill residues as hazardous wastes.

Rule 214. (1) The following materials or items are hazardous wastes when they are discarded or intended to be discarded as described in R 299.9202(1)(a), when they are burned for energy recovery instead of their original intended use, when they are used to produce fuels instead of their intended use, when they are applied to the land instead of their intended use, or when they are contained in products that are applied to the land instead of their original intended use:

(a) Any commercial chemical product or manufacturing chemical intermediate having the generic name in tables 205a, 205b, and 205c of these rules.

(b) Any off-specification commercial chemical product or manufacturing intermediate that, if it met specifications, would have the generic name listed in tables 205a, 205b, and 205c of these rules.

(c) Any residue that remains in a container or in an inner liner which is removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having the generic names listed in tables 205a, 205b, and 205c of these rules, unless the container is empty as defined in R 299.9207.

(d) Any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill into any water or on any land of any commercial chemical product, a manufacturing chemical intermediate having the generic name listed in tables 205a, 205b, and 205c of these rules, any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill into any water or on

any land of any off-specification chemical product, and manufacturing chemical intermediate that, if it met specifications, would have the generic name listed in tables 205a, 205b, and 205c of these rules.

(2) The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products listed by the administrator and identified in table 205a are acutely hazardous wastes (H).

(3) The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products listed by the administrator and identified in table 205b are toxic wastes (T).

(4) The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products listed by the director and identified in table 205c-are toxic wastes (T).

(5) As used in subrule (1) of this rule, the phrases "commercial chemical product," "manufacturing chemical intermediate," "off-specification commercial chemical product," and "manufacturing chemical intermediate" refer to materials that are manufactured or formulated for commercial or manufacturing use. The phrases do not refer to materials, such as manufacturing process wastes, that contain any of the substances listed in tables 205a, 205b, or 205c of these rules.

(6) Each hazardous waste listed in subrule (1) of this rule is assigned the hazardous waste number in tables 205a, 205b, or 205c of these rules that corresponds to the constituent that caused the waste to be hazardous. With regard to a mixture of hazardous wastes, a number must be assigned in the following priority order based upon the wastes or constituents present:

(a) Acutely hazardous, from table 205a.

(b) Toxic, from table 205b.

(c) Toxic, from table 205c of these rules.

If the constituents are listed in the same table, the number assigned must correspond to the constituents present in the greatest amount on a weight basis.

R 299.9215 Petitions for equivalent testing or analytical methods.

Rule 215. (1) Any person seeking to add a testing or analytical method to these rules may petition the director for a rules change under this rule. To be successful, the person shall demonstrate, to the satisfaction of the director, that the proposed method is equal to or superior to the corresponding method prescribed in the provisions of 40 C.F.R. part 261, 264, or 265 of these rules in terms of its sensitivity, accuracy, and precision.

(2) Each petition under this rule shall contain that information required by the provisions of 40 C.F.R. §§260.20(b) and 260.21(b).

(3) After receiving a petition for an equivalent method, the director, or his or her designee, shall, within 120 days of receiving the petition, request any additional information on the proposed method which he or she may reasonably require to evaluate the method. If the petition is granted, the director shall initiate rule change procedures under act 306.

(4) The provisions of 40 C.F.R. §§260.20(b) and 260.21(b) are adopted by reference in R 299.11003.

R 299.9216 Method of analysis.

Rule 216. (1) The method of analysis specified in the provisions of appendix I of 40 C.F.R. part 261 shall be used to identify the hazardous constituents listed in appendices VII and VIII of 40 C.F.R. part 261. Alternate methods of analysis may be used if approved by the director.

(2) The provisions of 40 C.F.R. part 261, appendices I, VII, and VIII are adopted by reference in R 299.11003.

R 299.9217 Table 201a.

Rule 217. Table 201a reads as follows:

Table 201a			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Material	Extract Concentration milligrams per liter
D004	440-38-2	Arsenic	5.0
D005	7440-39-3	Barium	100.0
D018	71-43-2	Benzene	0.5
D006	7440-43-9	Cadmium	1.0
D019	56-23-5	Carbon tetrachloride	0.5
D020	57-74-9	Chlordane	0.03
D021	108-90-7	Chlorobenzene	100.0
D022	67-66-3	Chloroform	6.0
D007	7440-47-3	Chromium	5.0
D023	95-48-7	o-Cresol	200.0**
D024	108-39-4	m-Cresol	200.0**
D025	106-44-5	p-Cresol	200.0**
D026	--------	Cresol	200.0**
D016	94-75-7	2,4-D (2,4-Dichlorophenoxyacetic Acid)	10.0
D027	106-46-7	1,4-Dichlorobenzene	7.5
D028	107-06-2	1,2-Dichloroethane	0.5
D029	75-35-4	1,1-Dichloroethylene	0.7
D030	121-14-2	2,4-Dinitrotoluene	0.13*
D012	72-20-8	Endrin (1,2,3,4,10,10-hexachloro-1,7-Epoxy-1,4,4a,5,6,7,8,8a octahydro-1,4-endo, endo-5,8-dimenthano naphthalene)	0.02
D031	76-44-8	Heptachlor (and its Epoxide)	0.008
D032	118-74-1	Hexachlorobenzene	0.13*
D033	87-68-3	Hexachlorobutadiene	0.5
D034	67-72-1	Hexachloroethane	3.0
D008	7439-92-1	Lead	5.0
D013	58-89-9	Lindane (1,2,3,4,5,6-hexa-chlorocyclo-hexane, gamma isomer)	0.4
D009	7439-97-6	Mercury	0.2
D014	72-43-5	Methoxychlor (1,1,1-trichloro-2,2-bis(p-methoxyphenyl)ethane)	10.0
D035	78-93-3	Methyl ethyl ketone	200.0
D036	98-95-3	Nitrobenzene	2.0
D037	87-86-5	Pentachlorophenol	100.0
D038	110-86-1	Pyridine	5.0*
D010	7782-49-2	Selenium	1.0
D011	7440-22-4	Silver	5.0
D039	127-18-4	Tetrachloroethylene	0.7
D015	8001-35-2	Toxaphene ($C_{10}H_{10}C1_8$, Technical chlorinated	0.5

Table 201a			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Material	Extract Concentration milligrams per liter
		camphene, 67-69% chlorine)	
D040	79-01-6	Trichloroethylene	0.5
D041	95-95-4	2,4,5-Trichlorophenol	400.0
D042	88-06-2	2,4,6-Trichlorophenol	2.0
D017	93-72-1	2,4,5-TP Silvex (2,4,5-Tri-chlorophenoxypropionic acid)	1.0
D043	75-01-4	Vinyl chloride	0.2

* Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.

**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.

R 299.9218 Rescinded.

R 299.9219 Table 202.
Rule 219. Table 202 reads as follows:

Table 202	
Michigan Hazardous Waste Number	Substance
001S	Aflatoxin
002S	2,3,7,8-Tetrachlorodibenzo-p-dioxin
003S	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
004S	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
005S	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
006S	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
007S	2,3,7,8-Tetrachloridibenzo furan

R 299.9220 Table 203a; hazardous waste from nonspecific sources.
Rule 220. Table 203a reads as follows:

Table 203a		
EPA Hazardous Waste Number	Hazardous Waste from Nonspecific Sources	Hazard Code
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 and blends used in degreasing containing, before use, a total of 10% or more, by volume, of 1 or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and	(T)

Table 203a		
EPA Hazardous Waste Number	Hazardous Waste from Nonspecific Sources	Hazard Code
	still bottoms from the recovery of these spent solvents and spent solvent mixtures	
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 and blends containing, before use, a total of 10% or more, by volume, of 1 or more of the above halogenated solvents or those solvents listed in F001, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures	(T)
F003	The following spent nonhalogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures and blends containing, before use, only the above spent nonhalogenated solvents; and all spent solvent mixtures or blends, containing before use, one or more of the above nonhalogenated solvents, and a total of 10% or more, by volume, of 1 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 nonhalogenated solvents: cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures and blends containing, before use, a total of 10% or more, by volume, of 1 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 nonhalogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures and blends containing, before use, a total of 10% or more, by volume, of 1 or more of the above nonhalogenated solvents or those solvents listed in F001, F002 and 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 used on a segregated basis on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning or 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 sludges from the bottom of plating baths from electroplating operations where cyanides are used in the process	(R,T)

Table 203a		
EPA Hazardous Waste Number	Hazardous Waste from Nonspecific Sources	Hazard Code
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 metal heat treating operations where cyanides are used in the process	(R,T)
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat-treating operations	(R,T)
F012	Quenching wastewater 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 both of the following requirements are met: 1) the wastes are not placed outside on the land prior to shipment to a landfill for disposal and are either disposed of in a solid waste landfill unit that is permitted or licensed under part 115, solid waste management, of the act; disposed in a hazardous waste landfill meeting the requirements of the act and these rules; or, if out of state, disposed of 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 receiving state; or disposed of in a landfill subject to, or otherwise meeting, the requirements of 40 C.F.R. §§258.40, 264.301, or 265.301, and 2) the generator maintains records to prove that the exempted sludges meet the conditions of the listing, including: volume of waste generated and disposed off site; date the waste was generated, date the waste was sent off site, name and address of receiving facility, and documentation confirming receipt. For the purposes of this listing, motor vehicle manufacturing means the engagement in the manufacture of complete automobiles and light trucks/utility vehicles or chassis only.	(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)
F022	Wastes, except wastewater and spent carbon from hydrogen chloride purification, from the manufacturing use as a reactant, chemical	(H)

Table 203a		
EPA Hazardous Waste Number	Hazardous Waste from Nonspecific Sources	Hazard Code
	intermediate, or component in a formulating process of tetra-, penta-, or hexachlorobenzenes under alkaline conditions	
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)
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 1 to 5, with varying amounts and positions of chlorine substitutions. This listing does not include wastewater, wastewater treatment sludges, spent catalysts, and wastes listed in R 299.9213(1)(a) or R 299.9214(1)(a)	(T)
F025	Condensed light ends, spent filters and filter acids, 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 1 to 5, with varying amounts and positions of chlorine substitution	(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 formulation 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 numbers F020, F021, F022, F023, F026, and F027	(T)
F032	Wastewaters, except for 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 hazardous waste number deleted pursuant to 40 C.F.R. §261.35 or potentially cross-contaminated wastes that are otherwise currently regulated as F034 or F035, and where the generator does not resume or initiate the use of chlorophenolic formulations. This listing does not include K001 bottom	(T)

Table 203a		
EPA Hazardous Waste Number	Hazardous Waste from Nonspecific Sources	Hazard Code
	sediment sludge from the treatment of wastewater from wood preserving processes that use creosote or pentachlorophenol, or both.	
F034	Wastewaters, except for 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 or pentachlorophenol, or both.	(T)
F035	Wastewaters, except for 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 or pentachlorophenol, or both.	(T)
F037	Petroleum refinery primary oil/water/solids (oil and/or water and/or 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. 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 generated in aggressive biological treatment units as defined in R 299.9213(4), including sludges generated in 1 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 R 299.9204(1)(l) if those residuals are being disposed.	(T)
F038	Petroleum refinery secondary (emulsified) oil/water/solids (oil and/or water and/or solids) separation sludge-any sludge or float generated from the physical 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 and 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 R 299.9213(4), including sludges and floats generated in ~~one~~**1**	(T)

Table 203a		
EPA Hazardous Waste Number	Hazardous Waste from Nonspecific Sources	Hazard Code
	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.	
F039	Leachate resulting from the treatment, storage, or disposal of wastes classified by more than 1 hazardous waste number pursuant to R 299.9213 and R 299.9214 or from a mixture of wastes classified pursuant to R 299.9213 and R 299.9214. Leachate resulting from the management of 1 or more of the following hazardous wastes, and no other hazardous wastes, retains its original hazardous waste number or numbers: F020, F021, F022, F023, F026, F027, or F028.	(T)

R 299.9221 Rescinded.

R 299.9222 Table 204a; hazardous wastes from specific sources.
Rule 222. Table 204a reads as follows:

Table 204a			
Industry	EPA Hazardous Waste Number	Hazardous Waste from Specific Sources	Hazard Code
Wood Preservation	K001	Bottom sediment sludge from the treatment of wastewaters from wood-preserving processes that use creosote or pentachlorophenol, or both of these compounds	(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 forms	(T)
	K007	Wastewater treatment sludge from the production of iron blue pigments	(T)
	K008	Oven residue from the production of chrome oxide green pigments	(T)
Organic Chemicals	K009	Distillation bottoms from the production of chemicals acetaldehyde from ethylene	(T)
	K010	Distillation side cuts from the production of	(T)

Table 204a			
Industry	EPA Hazardous Waste Number	Hazardous Waste from Specific Sources	Hazard Code
		acetaldehyde from ethylene	
	K011	Bottom stream from the wastewater stripper in the production of acrylonitrile	(R,T)
	K013	Bottom stream from the acetonitrile column in the production of acrylonitrile	(R,T)
	K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile	(T)
	K015	Still bottoms from the distillation of benzyl chloride	(T)
	K016	Heavy ends or distillation residues from the production of carbon tetrachloride	(T)
	K017	Heavy ends or still bottoms from the purification column in the production of epichlorohydrin	(T)
	K018	Heavy ends from the fractionation column in ethyl chloride production	(T)
	K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production	(T)
	K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production	(T)
	K021	Aqueous spent antimony catalyst waste from fluoromethanes production	(T)
	K022	Distillation bottom tars from the production of phenol or acetone from cumene	(T)
	K023	Distillation light ends from the production of phthalic anhydride from naphthalene	(T)
	K024	Distillation bottoms from the production of phthalic anhydride from naphthalene	(T)
	K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene	(T)
	K026	Stripping still tails from the production of methyl ethyl pyridines	(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 of fractionation column bottoms from the production of chlorobenzenes	(T)
	K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene	(T)

Table 204a			
Industry	EPA Hazardous Waste Number	Hazardous Waste from Specific Sources	Hazard Code
	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)
	K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane	(T)
	K103	Process residues from aniline extraction from the production of aniline	(T)
	K104	Combined wastewater streams generated from nitrobenzene or aniline production	(T)
	K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes	(T)
	K107	Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides	(C,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)
	K109	Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides	(T)
	K110	Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides	(T)
	K111	Product washwaters from the production of dinitrotoluene via nitration of toluene	(C,T)
	K112	Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene	(T)
	K113	Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene	(T)
	K114	Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene	(T)
	K115	Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene	(T)
	K116	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine	(T)

Table 204a			
Industry	EPA Hazardous Waste Number	Hazardous Waste from Specific Sources	Hazard Code
	K117	Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethane	(T)
	K118	Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene	(T)
	K136	Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene	(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)
	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)
	K151	Wastewater treatment sludges, excluding *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	(T)
	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	Baghouse 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)
	K161	Purification solids, including filtration, evaporation,	(R,T)

Table 204a			
Industry	EPA Hazardous Waste Number	Hazardous Waste from Specific Sources	Hazard Code
		and centrifugation solids, bag house dust, and floor sweepings from the production of dithiocarbamates acids and their salts. This listing does not include K125 or K126.	
	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: (1) they are disposed of in a hazardous waste landfill or a nonhazardous waste landfill licensed or permitted by the state or federal government, (2) they are not otherwise placed on the land before final disposal, and (3) 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 RCRA or part 111 of the act must, 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 herein. In doing so, they must provide appropriate documentation, such as contracts between the generator and the landfill owner/operator or invoices documenting delivery of the waste to the landfill, that the terms of the exclusion were met.	(T)
	K175	Wastewater treatment sludges from the production of vinyl chloride monomer using mercuric chloride catalyst in an acetylene-based process	(T)
	K181	Nonwastewaters from the production of dyes 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 K181 listing constituents identified in 40 C.F.R. §261.32(c) that are equal to or greater than the listing levels identified in 40 C.F.R. §261.32(c), as determined on a calendar year basis. These wastes shall not be considered hazardous if the nonwastewaters are managed in compliance with the requirements for this listing as	(T)

Table 204a			
Industry	EPA Hazardous Waste Number	Hazardous Waste from Specific Sources	Hazard Code
		outlined in of 40 C.F.R. §261.32(a). For the purposes of this listing, dyes or pigments production is defined to include manufacture of the following product classes: dyes, pigments, or federal food and drug administration 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 or pigments manufacturing site, such as wastes from the offsite use, formulation, and packaging of dyes or pigments, are not included in this listing. The process for demonstrating that a facility's nonwastewaters are not K181 is contained in 40 C.F.R. §261.32(d). This K181 listing does not apply to wastes that are otherwise identified as hazardous waste under R 299.9212, R 299.9217, R 299.9220, R 299.9222, R 299.9224, or R 299.9225 at the point of generation. Also, the listing does not apply to the wastes generated before any annual mass loading limit is met.	
Inorganic Chemicals	K071	Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used	(T)
	K073	Chlorinated hydrocarbon wastes from the purification step of the diaphragm cell process using graphite anodes in chlorine production	(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)
	K177	Slag from the production of antimony oxide that is speculatively accumulated or disposed, including slag from the production of intermediates	(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)

Table 204a			
Industry	EPA Hazardous Waste Number	Hazardous Waste from Specific Sources	Hazard Code
	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)
	K035	Wastewater treatment sludges generated in the production of creosote	(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 production of phorate	(T)
	K041	Wastewater treatment sludge from the production of toxaphene	(T)
	K042	Heavy ends of distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T	(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)
	K098	Untreated process wastewater from the production of toxaphene	(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)
	K124	Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salt	(C,T)
	K125	Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salt	(T)
	K126	Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts	(T)
	K131	Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl	(C,T)

Table 204a			
Industry	EPA Hazardous Waste Number	Hazardous Waste from Specific Sources	Hazard Code
		bromide	
	K132	Spent absorbent and wastewater separator solids from the production of methyl bromide	(T)
Explosives	K044	Wastewater treatment sludges from the manufacturing and processing of explosives	(I)
	K045	Spent carbon from the treatment of wastewater containing explosives	(I)
	K046	Wastewater treatment sludges from the manufacturing, formulation, and loading of lead-based initiating compounds	(T)
	K047	Pink or red water from TNT operations	(I)
Petroleum Refining	K048	Dissolved air floatation, DAF, float from the petroleum refining industry	(T)
	K049	Slop oil emulsion solids from the petroleum refining industry	(T)
	K050	Heat exchanger bundle cleaning sludge from the petroleum refining industry	(T)
	K051	API separator sludge from the petroleum refining industry	(T)
	K052	Tank bottoms, leaded, from the petroleum refining industry	(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 guard beds used to desulfurize feeds to other catalytic reactors. This listing does not include inert support media.	(I, T)
	K172	Spent hydrorefining 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)
Iron and Steel	K061	Emission control dust or sludge from the primary production of steel in electric furnaces	(T)
	K062	Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry	(C,T)
Primary Aluminum	K088	Spent potliners from primary aluminum reduction	(T)
	K069	Emission control dust or sludge from secondary lead	(T)

Table 204a			
Industry	EPA Hazardous Waste Number	Hazardous Waste from Specific Sources	Hazard Code
Secondary Lead		smelting. (This listing is stayed administratively for sludge generated from secondary acid scrubber systems. The stay will remain in effect until further action is taken by the EPA and notice published in the Federal Register.)	
	K100	Waste leaching solution from acid leaching of emission control dust sludge from secondary lead smelting	(T)
Veterinary Pharma-ceuticals	K084	Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds	(T)
	K101	Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic 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)
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)
Coking	K060	Ammonia still lime sludge from coking operations	(T)
	K087	Decanter tank tar sludge from coking operations	(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.	(T)
	K142	Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal	(T)
	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	(T)

Table 204a			
Industry	EPA Hazardous Waste Number	Hazardous Waste from Specific Sources	Hazard Code
		produced from coal	
	K147	Tar storage tank residues from coal tar refining	(T)
	K148	Residues from coal tar distillation, including, but not limited to, still bottoms	(T)

R 299.9223 Rescinded.

R 299.9224 Table 205a; discarded commercial chemical products; off-specification species; container residues; and spill residues thereof as acutely hazardous wastes.

Rule 224. Table 205a reads as follows:

Table 205a			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
P023	107-20-0	Acetaldehyde, chloro-	
P002	591-08-2	Acetamide, N-(aminothioxomethyl)-	
P057	640-19-7	Acetamide, 2-fluoro-	
P058	62-74-8	Acetic acid, fluoro-, sodium salt	
P002	591-08-2	1-Acetyl-2-thiourea	
P003	107-02-8	Acrolein	
P070	116-06-3	Aldicarb	
P203	1646-88-4	Aldicarb sulfone	
P004	309-00-2	Aldrin	
P005	107-18-6	Allyl alcohol	
P006	20859-73-8	Aluminum phosphide	(R,T,)
P007	2763-96-4	5-(Aminomethyl)-3-isoxazolol	
P008	504-24-5	4-Aminopyridine	
P009	131-74-8	Ammonium picrate	(R)
P119	7803-55-6	Ammonium vanadate	
P099	506-61-6	Argentate (1-), bis(cyano-C)-, potassium	
P010	7778-39-4	Arsenic acid	
P012	1327-53-3	Arsenic (III) oxide	
P011	1303-28-2	Arsenic (V) oxide or arsenic pentoxide	
P012	1327-53-3	Arsenic trioxide	
P038	692-42-2	Arsine, diethyl-	
P036	696-28-6	Arsonous dichloride, phenyl-	
P054	151-56-4	Aziridine	
P067	75-55-8	Aziridine, 2-methyl-	
P013	542-62-1	Barium cyanide	
P024	106-47-8	Benzenamine, 4-chloro-	

Table 205a			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
P077	100-01-6	Benzenamine, 4-nitro-	
P028	100-44-7	Benzene, (chloromethyl)-	
P042	51-43-4	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-	(R)
P046	122-09-2	Benzeneethanamine, alpha, alpha-dimethyl-	
P014	108-98-5	Benzenethiol	
P127	1563-66-2	7-benzofuranol, 2,3-dihydro-2,2-dimethyl-, methoycarbamate	
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)	
P001	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%	
P028	100-44-7	Benzyl chloride	
P015	7440-41-7	Beryllium powder	
P017	598-31-2	Bromoacetone	
P018	357-57-3	Brucine	
P045	39196-18-4	2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[(methylamino) carbonyl] oxime	
P021	592-01-8	Calcium cyanide or calcium cyanide $Ca(CN)_2$	
P189	55285-14-8	Carbamic acid, [(dibutylamino)-thio]methyl-, 2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester	
P191	644-64-4	Carbamic acid, dimethyl-, 1-[(dimethyl-amino)carbonyl]-5-methyl-1H-pyrazol-3-yl ester	
P192	119-38-0	Carbamic acid, dimethyl-, 3-methyl-1- (1-methylethyl)-1H-pyrazol-5-yl ester	
P190	1129-41-5	Carbamic acid, methyl-, 3-methylphenyl ester	
P127	1563-66-2	Carbofuran	
P022	75-15-0	Carbon disulfide	
P095	75-44-5	Carbonyl chloride	
P189	55285-14-8	Carbosulfan	
P023	107-20-0	Chloroacetaldehyde	
P024	106-47-8	p-Chloroaniline	
P026	5344-82-1	1-(o-Chlorophenyl)thiourea	
P027	542-76-7	3-Chloropropionitrile	
P029	544-92-3	Copper cyanide or copper cyanide Cu(CN)	
P202	64-00-6	m-Cumenyl methylcarbamate	
P030	--------	Cyanides (soluble cyanide salts), not elsewhere specified	
P031	460-19-5	Cyanogen	
P033	506-77-4	Cyanogen chloride or cyanogen chloride $(CN)C_1$	
P034	131-89-5	2-Cyclohexyl-4,6-dinitrophenol	
P016	542-88-1	Dichloromethyl ether	

Table 205a			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
P036	696-28-6	Dichlorophenylarsine	
P037	60-57-1	Dieldrin	
P038	692-42-2	Diethylarsine	
P041	311-45-5	Diethyl-p-nitrophenyl phosphate	
P040	297-97-2	O,O-Diethyl O-pyrazinyl phosphorothioate	
P043	55-91-4	Diisopropyl fluorophosphate	
P004	309-00-2	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta, 5alpha,8alpha,8abeta)-	
P060	465-73-6	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta, 5beta,8beta,8abeta)-	
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,2aalpha, 3beta,6beta,6aalpha,7beta,7aalpha)-	
P051	72-20-8	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, 6alpha,6abeta,7beta, 7aalpha)-, & metabolites	
P044	60-51-5	Dimethoate	
P046	122-09-8	alpha,alpha-Dimethylphenethylamine	
P191	644-64-4	Dimetilan	
P047	534-52-1	4,6-Dinitro-o-cresol and salts	
P048	51-28-5	2,4-Dinitrophenol	
P020	88-85-7	Dinoseb	
P085	152-18-9	Diphosphoramide, octamethyl-	
P111	107-49-3	Diphosphoric acid, tetraethyl ester	
P039	298-04-4	Disulfoton	
P049	541-53-7	2,4-Dithiobiuret	
P185	26419-73-8	1,3-Dithiolane-2-carboxaldehyde, 2-4-dimethyl-, O-[(methylamino)- carbonyl]oxime	
P050	115-29-7	Endosulfan	
P088	145-73-7	Endothall	
P051	72-20-8	Endrin, and metabolites	
P042	51-43-4	Epinephrine	
P031	460-19-5	Ethanedinitrile	
P194	23135-22-0	Ethanimidothioic acid, 2-(dimethylamino)-N-[[(methylamino) carbonyl]oxy]-2-oxo-, methyl ester	
P066	16752-77-5	Ethanimidothioic acid, N-[[(methylamine)carbonyl] oxyl]-, methyl ester	
P101	107-12-0	Ethyl cyanide	
P054	151-58-4	Ethyleneimine	

Table 205a			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
P097	52-85-7	Famphur	
P056	7782-41-4	Fluorine	
P057	640-19-7	Fluoroacetamide	
P058	62-74-8	Fluoroacetic acid, sodium salt	
P198	23422-53-9	Formetanate hydrochloride	
P197	17702-57-7	Formparanate	
P065	628-86-4	Fulminic acid, mercury (II) salt	(R,T)
P059	76-44-8	Heptachlor	
P062	757-58-4	Hexaethyl tetraphosphate	
P116	79-19-6	Hydrazinecarbothioamide	
P068	60-34-4	Hydrazine, methyl-	
P063	74-90-8	Hydrocyanic acid or hydrogen cyanide	
P096	7803-51-2	Hydrogen phosphide	
P060	465-73-6	Isodrin	
P192	119-38-0	Isolan	
P202	64-00-6	3-Isopropylphenyl N-methylcarbamate	
P007	2763-96-4	3(2H)-Isoxazolone, 5-(aminomethyl)-	
P196	15339-36-3	Manganese, bis(dimethylcarbamodithioato-S,S')-, or manganese, dimethyldithiocarbamate	
P092	62-38-4	Mercury, (acetato-O)phenyl-	
P065	628-86-4	Mercury fulminate	(R,T)
P082	62-75-9	Methanamine, N-methyl-N-nitroso-	
P064	624-83-9	Methane, isocyanato-	
P016	542-88-1	Methane, oxybis(chloro-	
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-4-[[(methylamino)carbonyl]oxy]phenyl]-	
P050	115-20-7	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide	
P059	76-44-8	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-	
P199	2032-65-7	Methiocarb	
P066	16752-77-5	Methomyl	
P068	60-34-4	Methyl hydrazine	
P064	624-83-9	Methyl isocyanate	
P069	75-86-5	2-Methyllactonitrile	
P071	298-00-0	Methyl parathion	
P190	1129-41-5	Metolcarb	

Table 205a			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
P128	315-18-4	Mexacarbate	
P072	86-88-4	alpha-Naphthylthiourea	
P073	13463-39-3	Nickel carbonyl or nickel carbonyl $Ni(CO)_4$, (T-4)-	
P074	557-19-7	Nickel cyanide or nickel (II) cyanide	
P075	54-11-5	Nicotine and salts	
P076	10102-43-9	Nitric oxide	
P077	100-01-6	p-Nitroaniline	
P078	10102-44-0	Nitrogen dioxide or nitrogen (IV) oxide	
P076	10102-43-9	Nitrogen (II) oxide	
P081	55-63-0	Nitroglycerine	(R)
P082	62-75-9	N-Nitrosodimethylamine	
P084	4549-40-0	N-Nitrosomethylvinylamine	
P085	152-16-9	Octamethylpyrophosphor-amide	
P087	20816-12-0	Osmium oxide or osmium tetroxide	
P088	145-73-3	7-Oxabicyclo [2.2.1] heptane-2,3-dicarboxylic acid	
P194	23135-22-0	Oxamyl	
P089	56-38-2	Parathion	
P034	131-89-5	Phenol, 2-cyclohexyl-4,6-dinitro-	
P128	315-18-4	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester)	
P199	2032-65-7	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate	
P048	51-28-5	Phenol, 2,4-dinitro-	
P047	534-52-1	Phenol, 2-methyl-4,6-dinitro- and salts	
P202	64-00-6	Phenol, 3-(1-methylethyl)-, methyl carbamate	
P201	2631-37-0	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate	
P020	88-85-7	Phenol, 2,4-dinitro-6-(1-methylpropyl)-	
P009	131-74-8	Phenol, 2,4,6-trinitro-, ammonium salt	(R)
P092	62-38-4	Phenylmercuric acetate	
P093	103-85-5	N-Phenylthiourea	
P094	298-02-2	Phorate	
P095	75-44-5	Phosgene	
P096	783-51-2	Phosphine	
P041	311-45-5	Phosphoric acid, diethyl p-nitrophenyl ester	
P039	298-04-4	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester	
P094	298-02-2	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio) methyl] ester	
P044	60-51-5	Phosphorodithioic acid, O,O-dimethyl S-O[2-(methylamino)-2-oxoethyl] ester	
P043	55-91-4	Phosphorofluoridic acid, bis(1-methylethyl)ester	
P089	56-38-2	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester	
P040	297-97-2	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	

Table 205a			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
P097	52-85-7	Phosphorothioic acid, O,O-dimethyl O-[p-((dimethylamino) sulfonyl)phenyl] ester	
P071	298-00-0	Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester	
P204	57-47-6	Physostigmine	
P188	57-64-7	Physostigmine salicylate	
P110	78-00-2	Plumbane, tetraethyl-	
P098	151-50-8	Potassium cyanide or potassium cyanide K(CN)	
P099	506-61-6	Potassium silver cyanide	
P201	2631-37-0	Promecarb	
P203	1646-88-4	Propanal, 2-methyl-2-(methyl-sulfonyl)-,O-[(methylamino)carbonyl] oxime	
P070	116-06-3	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl] oxime	
P101	107-12-0	Propanenitrile	
P027	542-76-7	Propanenitrile, 3-chloro-	
P069	75-86-5	Propanenitrile, 2-hydroxy-2-methyl-	
P081	55-63-0	1,2,3-Propanetriol, trinitrate-	(R)
P017	596-31-2	2-Propanone, 1-bromo-	
P102	107-19-7	Propargyl alcohol	
P003	107-02-8	2-Propenal	
P005	107-18-6	2-Propen-1-ol	
P067	75-55-8	1,2-Propylenimine	
P102	107-19-7	2-Propyn-1-ol	
P008	504-24-5	4-Pyridinamine	
P075	54-11-5	Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts	
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)-	
P114	12039-52-0	Selenious acid, dithallium(1+) salt	
P103	630-10-4	Selenourea	
P104	506-64-9	Silver cyanide or silver cyanide Ag(CN)	
P105	26628-22-8	Sodium azide	
P106	143-33-9	Sodium cyanide or sodium cyanide Na(CN)	
P108	57-24-9	Strychnidin-10-one, and salts, or strychnine and salts	
P018	357-57-3	Strychnidin-10-one, 2,3-dimethoxy-	
P115	7446-18-6	Sulfuric acid, thallium (I) salt	
P109	3689-24-5	Tetraethyldithiopyrophosphate	
P110	78-00-2	Tetraethyl lead	
P111	107-49-3	Tetraethylpyrophosphate	
P112	509-14-8	Tetranitromethane	(R)
P062	757-58-4	Tetraphosphoric acid, hexaethyl ester	
P113	1314-32-5	Thallic oxide or thallium (III) oxide	

Table 205a			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
P114	12039-52-0	Thallium (I) selenite	
P115	7446-18-6	Thallium (I) sulfate	
P109	3689-24-5	Thiodiphosphoric acid, tetraethyl ester	
P045	39196-18-4	Thiofanox	
P049	541-53-7	Thioimidodicarbonic diamide	
P014	108-98-5	Thiophenol	
P116	79-19-6	Thiosemicarbazide	
P026	5344-82-1	Thiourea, (2-chlorophenyl)-	
P072	86-88-4	Thiourea, 1-naphthalenyl-	
P093	103-85-5	Thiourea, phenyl-	
P185	26419-73-8	Tirpate	
P123	8001-35-2	Toxaphene	
P118	75-70-7	Trichloromethanethiol	
P119	7803-55-6	Vanadic acid, ammonium salt	
P120	1314-62-1	Vanadium (V) oxide or vanadium pentoxide	
P084	4549-40-0	Vinylamine, N-methyl-N-nitroso-	
P001	81-81-2	Warfarin, when present at concentrations greater than 0.3%	
P205	137-30-4	Zinc, bis(dismethylcarbamodithioato-S,S')-	
P121	557-21-1	Zinc cyanide or zinc cyanide $Zn(CN)_2$	
P122	1314-84-7	Zinc phosphide, when present at concentrations greater than 10%	(R,T)
P205	137-30-4	Ziram	

R 299.9225 Table 205b; discarded commercial chemical products; off-specification species; container residues; and spill residues thereof as toxic hazardous wastes.

Rule 225. Table 205b reads as follows:

Table 205b			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
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-y1-	
U240	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)-	

Table 205b			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
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-	
U280	101-27-9	Barban	
U278	22781-23-3	Bendiocarb	
U364	22961-82-6	Bendiocarb phenol	
U271	17804-35-2	Benomyl	
U157	56-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	
U016	225-51-4	Benz[c]acridine	
U017	98-87-3	Benzal chloride	
U192	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	
U018	56-55-3	Benz[a]anthracene	
U094	57-97-6	1,2-Benzanthracene, 7,12-dimethyl-	
U012	62-53-3	Benzenamine	(I,T)
U014	492-80-8	Benzenamine, 4,4'-carbonimidoylbis(N,N-dimethyl-	
U049	3165-93-3	Benzenamine, 4-chloro-2-methyl-	
U093	60-11-7	Benzenamine, N,N-dimethyl-4-(phenylazo)-	
U328	95-53-4	Benzenamine, 2-methyl-	
U353	106-49-0	Benzenamine, 4-methyl-	
U158	101-14-4	Benzenamine, 4,4'-methylenebis(2-chloro-	
U222	636-21-5	Benzenamine, 2-methyl-, hydrochloride	
U181	99-55-8	Benzenamine, 2-methyl-5-nitro	
U019	71-43-2	Benzene	(I,T)
U038	510-15-8	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy, ethyl ester	
U030	101-55-3	Benzene, 1-bromo-4-phenoxy-	
U035	305-03-03	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-	
U037	106-90-7	Benzene, chloro-	

Table 205b			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
U221	25376-45-8	Benzenediamine, ar-methyl-	
U028	117-81-7	1,2-Benzenedicarboxylic acid, [bis(2-ethyl-hexyl)] ester	
U069	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester	
U088	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester	
U102	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester	
U107	117-84-0	1,2-Benzenedicarboxylic acid, di-n-octyl ester	
U070	95-50-1	Benzene, 1,2-dichloro-	
U071	541-73-1	Benzene, 1,3-dichloro-	
U072	106-46-7	Benzene, 1,4-dichloro-	
U060	72-54-8	Benzene, 1,1'-(2,2-dichloroethylidene)bis=[4-chloro-	
U017	98-87-3	Benzene (dichloromethyl)-	
U223	26471-62-5	Benzene, 1,3-diisocyanatomethyl-	(R,T)
U239	1330-20-7	Benzene, dimethyl-	(I,~~T~~)
U201	108-46-3	1,3-Benzenediol	
U127	118-74-1	Benzene, hexachloro-	
U056	110-82-7	Benzene, hexahydro-	(I)
U220	108-88-3	Benzene, methyl-	
U105	121-14-2	Benzene, 1-methyl-2,4-dinitro-	
U106	606-20-2	Benzene, 1-methyl-2,6-dinitro-	
U055	98-82-8	Benzene, (1-methylethyl)-	(I)
U169	98-95-3	Benzene, nitro-	(I,T)
U183	608-93-5	Benzene, pentachloro-	
U185	82-68-8	Benzene, pentachloronitro-	
U020	98-09-9	Benzenesulfonic acid chloride or benzenesulfonyl chloride	(C,R)
U207	95-94-3	Benzene, 1,2,4,5-tetrachloro-	
U061	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene)=bis [4-chloro-	
U247	72-43-5	Benzene, 1,1'-(2,2,2-trichloroethylidene)=bis [4-methoxy-	
U023	98-07-7	Benzene, (trichloromethyl)-	(C,R,T)
U234	99-35-4	Benzene, 1,3,5-trinitro-	(R,T)
U021	92-87-5	Benzidine	
U202	81-07-2	1,2-Benzisothiazol-3-(2H)-one, 1,1-dioxide and salts	
U278	22781-23-3	1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate	
U364	22961-82-6	1,3-Benzodioxol-4-ol, 2,2-dimethyl-,	
U203	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-	
U141	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-	
U090	94-58-6	1,3-Benzodioxole, 5-propyl-	
U367	1563-38-8	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-	

Table 205b			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
U064	189-55-9	Benzo[rst]pentaphene	
U248	81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, and salts, when present at concentrations of 0.3% or less	
U022	50-32-8	Benzo[a]pyrene	
U197	106-51-4	p-Benzoquinone	
U023	98-07-7	Benzotrichloride	(C,R,T)
U085	1464-53-5	2,2'-Bioxirane	(I,T)
U021	92-87-5	(1,1'-Biphenyl)-4,4'-diamine	
U073	91-94-1	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dichloro-	
U091	119-90-4	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethoxy-	
U095	119-93-7	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethyl-	
U225	75-25-2	Bromoform	
U030	101-55-3	4-Bromophenyl phenyl ether	
U128	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	
U172	924-16-3	1-Butanamine, N-butyl-N-nitroso-	
U031	71-36-3	1-Butanol	(I)
U159	78-93-3	2-Butanone	(I,T)
U160	1338-23-4	2-Butanone peroxide	(R,T)
U053	4170-30-3	2-Butenal	
U074	764-41-0	2-Butene, 1,4-dichloro-	(I,T)
U143	303-34-4	2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxybutoyx]methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-y1 ester, [1S-[1alpha(Z),7(2S*,3R*), 7aalpha]]-	
U031	71-36-3	n-Butyl alcohol	(I)
U136	75-60-5	Cacodylic acid	
U032	13765-19-0	Calcium chromate	
U372	10605-21-7	Carbamic acid, 1H-benzimidazol-2-yl, methyl ester	
U271	17804-35-2	Carbamic acid, [1-[(butylamino)carbonyl]-1H-benzimidazol-2-yl]-, methyl ester	
U280	101-27-9	Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester	
U238	51-79-6	Carbamic acid, ethyl ester	
U178	815-53-2	Carbamic acid, methylnitroso-, ethyl ester	
U373	122-42-9	Carbamic acid, phenyl-, 1-methylethyl ester	
U409	23564-05-8	Carbamic acid, [1,2-phenylenebis(iminocarbonothioyl)]bis-, dimethyl ester	
U097	79-44-7	Carbamic chloride, dimethyl	
U114	111-54-6	Carbamodithioic acid, 1,2-ethanediylbis-, salts and esters	

Table 205b			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
U062	2303-16-4	Carbamodithioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester	
U389	2303-17-5	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester	
U387	52888-80-9	Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester	
U279	63-25-2	Carbaryl	
U372	10605-21-7	Carbendazim	
U367	1563-38-8	Carbofuran phenol	
U215	6533-73-9	Carbonic acid, dithallium(1+) salt	
U156	79-22-1	Carbonochloridic acid, methyl ester	(I,T)
U033	353-50-4	Carbon oxyfluoride	(R,T)
U211	56-23-5	Carbon tetrachloride	
U034	75-87-6	Chloral	
U035	305-03-3	Chlorambucil	
U036	57-74-9	Chlordane, technical	
U026	494-03-1	Chlornaphazine	
U037	108-90-7	Chlorobenzene	
U038	510-15-6	Chlorobenzilate	
U039	59-50-7	4-Chloro-m-cresol	
U042	110-75-8	2-Chloroethyl vinyl ether	
U044	67-66-3	Chloroform	
U046	107-30-2	Chloromethyl methyl ether	
U047	91-58-7	beta-Chloronaphthalene	
U048	95-57-8	o-Chlorophenol	
U049	3165-93-3	4-Chloro-o-toluidine, hydrochloride	
U032	13765-19-0	Chromic acid, calcium salt	
U050	218-01-9	Chrysene	
U051	------	Creosote	
U052	1319-77-3	Cresylic acid	
U053	4170-30-3	Crotonaldehyde	
U055	98-82-8	Cumene	(I)
U246	506-68-3	Cyanogen bromide	
U197	106-51-4	1,4-Cyclohexadienedione	
U056	110-82-7	Cyclohexane	(I)
U129	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha, 2alpha,3beta,4alpha, 5alpha,6beta)-	
U057	108-94-1	Cyclohexanone	(I)
U130	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexa-chloro-	
U058	50-18-0	Cyclophosphamide	
U240	94-75-7	2,4-D, salts and esters	
U059	20830-81-3	Daunomycin	

Table 205b			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
U060	72-54-8	DDD	
U061	50-29-3	DDT	
U062	2303-16-4	Diallate	
U063	53-70-3	Dibenz[a,h]anthracene	
U064	189-55-9	Dibenz[a,i]pyrene	
U066	96-12-8	1,2-Dibromo-3-chloropropane	
U069	84-74-2	Dibutyl phthalate	
U070	95-50-1	o-Dichlorobenzene	
U071	541-73-1	m-Dichlorobenzene	
U072	106-46-7	p-Dichlorobenzene	
U073	91-94-1	3,3'-Dichlorobenzidine	
U074	764-41-0	1,4-Dichloro-2-butene	(I,T)
U075	75-71-8	Dichlorodifluoromethane	
U078	75-35-4	1,1-Dichloroethylene	
U079	156-60-5	1,2-Dichloroethylene	
U025	111-44-4	Dichloroethyl ether	
U027	108-60-1	Dichloroisopropyl ether	
U024	111-91-7	Dichloromethoxy ethane	
U081	120-83-2	2,4-Dichlorophenol	
U082	87-65-0	2,6-Dichlorophenol	
U084	542-75-6	1,3-Dichloropropene	
U085	1464-53-5	1,2:3,4-Diepoxybutane	(I,T)
U108	123-91-1	1,4-Diethylene dioxide	
U395	5952-26-1	Diethylene glycol, dicarbamate	
U028	117-81-7	Diethylhexyl phthalate	
U086	1615-80-1	N,N-Diethylhydrazine	
U087	3288-58-2	O,O-Diethyl-S-methyl-dithiophosphate	
U088	84-66-2	Diethyl phthalate	
U089	56-53-1	Diethylstilbestrol	
U090	94-58-6	Dihydrosafrole	
U091	119-90-4	3,3'-Dimethoxybenzidine	
U092	124-40-3	Dimethylamine	(I)
U093	60-11-7	Dimethylaminoazobenzene	
U094	57-97-6	7,12-Dimethylbenz[a]anthracene	
U095	119-93-7	3,3'-Dimethylbenzidine	
U096	80-15-9	alpha,alpha-Dimethyl-benzylhydroperoxide	(R)
U097	79-44-7	Dimethylcarbamoyl chloride	
U098	57-14-7	1,1-Dimethylhydrazine	
U099	540-73-8	1,2-Dimethylhydrazine	
U101	105-67-9	2,4-Dimethylphenol	
U102	131-11-3	Dimethyl phthalate	
U103	77-78-1	Dimethyl sulfate	

Table 205b			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
U105	121-14-2	2,4-Dinitrotoluene	
U106	606-20-2	2,6-Dinitrotoluene	
U107	117-84-0	Di-n-octyl phthalate	
U108	123-91-1	1,4-Dioxane	
U109	122-66-7	1,2-Diphenylhydrazine	
U110	142-84-7	Dipropylamine	(I)
U111	621-64-7	Di-n-propylnitrosamine	
U041	106-89-8	Epichlorhydrin	
U001	75-07-0	Ethanal	(I)
U174	55-18-5	Ethanamine, N-ethyl-N-nitroso-	
U404	121-44-8	Ethanamine, N,N-diethyl-	
U155	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-	
U067	106-93-4	Ethane, 1,2-dibromo-	
U076	75-34-3	Ethane, 1,1-dichloro-	
U077	107-06-2	Ethane, 1,2-dichloro-	
U131	67-72-1	Ethane, 1,1,1,2,2,2-hexachloro-	
U024	111-91-1	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-	
U117	60-29-7	Ethane, 1,1'-oxybis-	(I)
U025	111-44-4	Ethane, 1,1'-oxybis[2-chloro-	
U184	76-01-7	Ethane, pentachloro-	
U208	630-20-6	Ethane, 1,1,1,2-tetrachloro-	
U209	79-34-5	Ethane, 1,1,2,2-tetrachloro-	
U218	62-55-5	Ethanethioamide	
U226	71-55-6	Ethane, 1,1,1-trichloro-	
U227	79-00-5	Ethane, 1,1,2-trichloro-	
U410	59669-26-0	Ethanimidothioic acid, N,N'-[thiobis[(methylimino)carbonyloxy]]bis-, dimethyl ester	
U394	30558-43-1	Ethanimidothioic acid, 2-(dimethylamino)-n-hydroxy-2-oxo- methyl ester	
U359	110-80-5	Ethanol, 2-ethoxy-	
U173	1116-54-7	Ethanol, 2,2'-(nitrosoimino)bis-	
U395	5952-26-1	Ethanol, 2,2'-oxybis-, dicarbamate	
U004	98-86-2	Ethanone, 1-phenyl	
U043	75-01-4	Ethene, chloro-	
U042	110-75-8	Ethene, 2-chloroethoxy-	
U078	75-35-4	Ethene, 1,1-dichloro-	
U079	156-60-5	Ethene, trans-1,2-dichloro-	
U210	127-18-4	Ethene, 1,1,2,2-tetrachloro-	
U228	79-01-6	Ethene, trichloro-	
U112	141-78-8	Ethyl acetate	(I)

Table 205b			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
U113	140-88-5	Ethyl acrylate	(I)
U238	51-79-6	Ethyl carbamate (urethane)	
U117	60-29-7	Ethyl ether	(I)
U114	111-54-6	Ethylenebis(dithiocarbamic acid), salts and ester	
U067	106-93-4	Ethylene dibromide	
U077	107-06-2	Ethylene dichloride	
U359	110-80-5	Ethylene glycol monoethyl ether	
U115	75-21-8	Ethylene oxide	(I,T)
U116	96-45-7	Ethylene thiourea	
U076	75-34-3	Ethylidene dichloride	
U118	97-63-2	Ethyl methacrylate	
U119	62-50-0	Ethyl methanesulfonate	
U120	206-44-0	Fluoranthene	
U122	50-00-0	Formaldehyde	
U123	64-18-6	Formic acid	(C,T)
U124	110-00-9	Furan	(I)
U125	98-01-1	2-Furancarboxaldehyde	(I)
U147	108-31-6	2,5-Furandione	
U213	109-99-9	Furan, tetrahydro-	(I)
U125	98-01-1	Furfural	(I)
U124	110-00-9	Furfuran	(I)
U206	18883-66-4	Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-, D-	
U206	18883-66-4	D-Glucose, 2-deoxy-2-[[(methylnitrosoamino) carbonyl]amino]-	
U126	765-34-4	Glycidylaldehyde	
U163	70-25-7	Guanidine, N-methyl-N'-nitro-N-nitroso-	
U127	118-74-1	Hexachlorobenzene	
U128	87-68-3	Hexachlorobutadiene	
U130	77-47-4	Hexachlorocyclopentadiene	
U131	67-72-1	Hexachloroethane	
U132	70-30-4	Hexachlorphene	
U243	1888-71-7	Hexachloropropene	
U133	302-01-2	Hydrazine	(R,T)
U086	1615-80-1	Hydrazine, 1,2-diethyl-	
U098	57-14-7	Hydrazine, 1,1-dimethyl-	
U099	540-73-8	Hydrazine, 1,2-dimethyl-	
U109	122-66-7	Hydrazine, 1,2-diphenyl-	
U134	7664-39-3	Hydrofluoric acid or hydrogen fluoride	(C,T)
U135	7783-06-4	Hydrogen sulfide or hydrogen sulfide H_2S	
U096	80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl-	(R)
U116	96-45-7	2-Imidazolidinethione	

Table 205b			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
U137	193-39-5	Indeno[1,2,3cd]pyrene	
U190	85-44-9	1,3-Isobenzofurandione	
U140	78-83-1	Isobutyl alcohol	(I,T)
U141	120-58-1	Isosafrole	
U142	143-50-0	Kepone	
U143	303-34-4	Lasiocarpine	
U144	301-04-2	Lead acetate	
U146	1335-32-6	Lead, bis(acetato-O) tetrahydroxytri-	
U145	7446-27-7	Lead phosphate	
U146	1335-32-6	Lead subacetate	
U129	58-89-9	Lindane	
U163	70-25-7	MNNG	
U147	108-31-6	Maleic anhydride	
U148	123-33-1	Maleic hydrazide	
U149	109-77-3	Malononitrile	
U150	148-82-3	Melphalan	
U151	7439-97-6	Mercury	
U152	126-98-7	Methacrylonitrile	(I,T)
U092	124-40-3	Methanamine, N-methyl-	(I)
U029	74-83-9	Methane, bromo-	
U045	74-87-3	Methane, chloro-	(I,T)
U046	107-30-2	Methane, chloromethoxy-	
U068	74-95-3	Methane, dibromo-	
U080	75-09-2	Methane, dichloro-	
U075	75-71-8	Methane, dichlorodifluoro-	
U138	74-88-4	Methane, iodo-	
U119	62-50-0	Methanesulfonic acid, ethyl ester	
U211	56-23-5	Methane, tetrachloro-	
U153	74-93-1	Methanethiol	(I,T)
U225	75-25-2	Methane, tribromo-	
U044	67-66-3	Methane, trichloro-	
U121	75-69-4	Methane, trichlorofluoro-	
U036	57-74-9	4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-3a,4,7,7a-tetrahydro	
U154	67-56-1	Methanol	(I)
U155	91-80-5	Methapyrilene	
U142	143-50-0	1,3,4-Metheneo-2H-cyclobuta[cd]pentalen-2-one,1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-	
U247	72-43-5	Methoxychlor	
U154	67-56-1	Methyl alcohol	(I)
U029	74-83-9	Methyl bromide	
U186	504-60-9	1-Methylbutadiene	(I)

Table 205b			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
U045	74-87-3	Methyl chloride	(I,T)
U156	79-22-1	Methyl chlorocarbonate	(I,T)
U226	71-55-6	Methylchloroform	
U157	56-49-5	3-Methylcholanthrene	
U158	101-14-4	4,4'-Methylenebis(2-chloroaniline)	
U068	74-95-3	Methylene bromide	
U080	75-09-2	Methylene chloride	
U159	78-93-3	Methyl ethyl ketone	(I,T)
U160	1338-23-4	Methyl ethyl ketone peroxide	(R,T)
U138	74-88-4	Methyl iodide	
U161	108-10-1	Methyl isobutyl ketone	(I)
U162	80-62-6	Methyl methacrylate	(I,T)
U161	108-10-1	4-Methyl-2-pentanone	(I)
U164	56-04-2	Methylthiouracil	
U010	50-07-7	Mitomycin	(C)
U059	20830-81-3	5,12-Naphthacenedione, (8S-cis)-8-acetyl-10-[(3-amino-2,3,6-trideoxy-alpha-L-lyxohexopyranosyl)oxyl]- 7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-	
U167	134-32-7	1-Naphthalenamine	
U168	91-59-8	2-Naphthalenamine	
U026	494-03-1	Naphthalenamine, N,N'-bis(2-chloroethyl)-	
U165	91-20-3	Naphthalene	
U047	91-58-7	Naphthalene, 2-chloro-	
U166	130-15-4	1,4-Naphthalenedione	
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	
U279	63-25-2	1-Naphthalenol, methylcarbamate	
U166	130-15-4	1,4-Naphthoquinone	
U167	134-32-7	alpha-Naphthylamine	
U168	91-59-8	beta-Naphthylamine	
U217	10102-45-1	Nitric acid, thallium(1+) salt	
U169	98-95-3	Nitrobenzene	(I,T)
U170	100-02-7	p-Nitrophenol	
U171	79-46-9	2-Nitropropane	(I,T)
U172	924-16-3	N-Nitrosodi-n-butylamine	
U173	1116-54-7	N-Nitrosodiethanolamine	
U174	55-18-5	N-Nitrosodiethylamine	
U176	759-73-9	N-Nitroso-N-ethylurea	
U177	684-93-5	N-Nitroso-N-methylurea	
U178	615-53-2	N-Nitroso-N-methylurethane	

Table 205b			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
U179	100-75-4	N-Nitrosopiperidine	
U180	930-55-2	N-Nitrosopyrrolidine	
U181	99-55-8	5-Nitro-o-toluidine	
U193	1120-71-4	1,2-Oxathiolane, 2,2-dioxide	
U058	50-18-0	2H-1,3,2-Oxazaphosphorin, 2-amine, N,N-bis(2-chloroethyl) tetrahydro-, 2-oxide	
U115	75-21-8	Oxirane	(I,T)
U126	765-34-4	Oxiranecarboxyaldehyde	
U041	106-89-8	Oxirane, 2-(chloromethyl)-	
U182	123-63-7	Paraldehyde	
U183	608-93-5	Pentachlorobenzene	
U184	76-01-7	Pentachloroethane	
U185	82-68-8	Pentachloronitrobenzene	
See F027	87-86-5	Pentachlorophenol	
U186	504-60-9	1,3-Pentadiene	
U161	108-10-1	Pentanonl, 4-methyl-	
U187	62-44-2	Phenacetin	
U188	108-95-2	Phenol	
U048	95-57-8	Phenol, 2-chloro-	
U039	59-50-7	Phenol, 4-chloro-3-methyl-	
U081	120-83-2	Phenol, 2,4-dichloro-	
U082	87-65-0	Phenol, 2,6-dichloro-	
U089	56-53-1	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)-	
U101	105-67-9	Phenol, 2,4-dimethyl-	
U052	1319-77-3	Phenol, methyl-	
U132	70-30-4	Phenol, 2,2'-methylenebis[3,4,6-trichloro-	
U411	114-26-1	Phenol, 2-(1-methylethoxy)-, methylcarbamate	
U170	100-02-7	Phenol, 4-nitro-	
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-	
U150	148-82-3	L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-	
U145	7446-27-7	Phosphoric acid, lead salt	
U087	3288-58-2	Phosphorodithioic acid, 0,0-diethyl-S-methyl ester	
U189	1314-80-3	Phosphorus sulfide	(R)
U190	85-44-9	Phthalic anhydride	
U191	109-06-8	2-Picoline	
U179	100-75-4	Piperidine, 1-nitroso-	
U192	23950-58-5	Pronamide	
U194	107-10-8	1-Propanamine	(I,T)
U111	621-64-7	1,Propanamine, N-nitroso-N-propyl-	

Table 205b			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
U110	142-84-7	1-Propanamine, N-propyl-	(I)
U066	96-12-8	Propane, 1,2-dibromo-3-chloro-	
U083	78-87-5	Propane, 1,2-dichloro-	
U149	109-77-3	Propanedinitrile	
U171	79-46-9	Propane, 2-nitro-	(I,T)
U027	108-60-1	Propane, 2,2'oxybis[2-chloro-	
U193	1120-71-4	1,3-Propane sultone	
See F027	93-72-1	Propionic acid, 2-(2,4,5-trichlorphenoxy)-	
U235	126-72-7	1-Propanol, 2,3-dibromo-, phosphate (3:1)	
U140	78-83-1	1-Propanol, 2-methyl-	(I,T)
U002	67-64-1	2-Propanone	(I)
U007	79-06-1	2-Propenamide	
U084	542-75-6	Propene, 1,3-dichloro-	
U243	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-	
U009	107-13-1	2-Propenenitrile	
U152	126-98-7	2-Propenenitrile, 2-methyl-	(I,T)
U008	79-10-7	2-Propenoic acid	(I)
U113	140-88-5	2-Propenoic acid, ethyl ester	(I)
U118	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester	
U162	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester	(I,T)
U373	122-42-9	Propham	
U411	114-26-1	Propoxur	
U194	107-10-8	n-Propylamine	(I,T)
U083	78-87-5	Propylene dichloride	
U387	52888-80-9	Prosulfocarb	
U148	123-33-1	3,6-Pyridazinedione, 1,2-dihydro-	
U196	110-86-1	Pyridine	
U191	109-06-8	Pyridine, 2-methyl-	
U237	66-75-1	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-	
U164	56-04-2	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-	
U180	930-55-2	Pyrrole, tetrahydro-N-nitroso-	
U200	50-55-5	Reserpine	
U201	108-46-3	Resorcinol	
U203	94-59-7	Safrole	
U204	7783-00-8	Selenious acid or selenium dioxide	
U205	7488-56-4	Selenium sulfide or selenium sulfide SeS_2	(R,T)
U015	115-02-6	L-Serine, diazoacetate (ester)	
See F027	93-72-1	Silvex	
U206	18883-66-4	Streptozotocin	
U103	77-78-1	Sulfuric acid, dimethyl ester	
U189	1314-80-3	Sulfur phosphide	(R)

Table 205b			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
See F027	93-76-5	2,4,5-T	
U207	95-94-3	1,2,4,5-Tetrachlorobenzene	
U208	630-20-6	1,1,1,2-Tetrachloroethane	
U209	79-34-5	1,1,2,2-Tetrachloroethane	
U210	127-18-4	Tetrachloroethylene	
See F027	58-90-2	2,3,4,6-Tetrachlorophenol	
U213	109-99-9	Tetrahydrofuran	(I)
U214	563-68-8	Thallium (I) acetate	
U215	6533-73-9	Thallium (I) carbonate	
U216	7791-12-0	Thallium (I) chloride or thallium chloride TlCl	
U217	10102-45-1	Thallium (I) nitrate	
U218	62-55-5	Thioacetamide	
U410	59669-26-0	Thiodicarb	
U153	74-93-1	Thiomethanol	(I,T)
U244	137-26-8	Thioperoxydicarbonic diamide $[(H_2N)C(S)]_2S_2$, tetramethyl-	
U409	23564-05-8	Thiophanate-methyl	
U219	62-56-6	Thiourea	
U244	137-26-8	Thiram	
U220	108-88-3	Toluene	
U221	25376-45-8	Toluenediamine	
U223	26471-62-5	Toluene diisocyanate	(R,T)
U328	95-53-4	o-Toluidine	
U353	106-49-0	p-Toluidine	
U222	636-21-5	o-Toluidine hydrochloride	
U389	2303-17-5	Triallate	
U011	61-82-5	1H-1,2,4-Triazol-3-amine	
U227	79-00-5	1,1,2-Trichloroethane	
U228	79-01-6	Trichloroethylene	
U121	75-69-4	Trichloromonofluoromethane	
See F027	95-95-4	2,4,5-Trichlorophenol	
See F027	88-06-2	2,4,6-Trichlorophenol	
U404	121-44-8	Triethylamine	
U234	99-35-4	1,3,5-Trinitrobenzene	(R,T)
U182	123-63-7	1,3,5-Trioxane, 2,4,6-trimethyl-	
U235	126-72-7	Tris(2,3-Dibromopropyl) phosphate	
U236	72-57-1	Trypan blue	
U237	66-75-1	Uracil mustard	
U176	759-73-9	Urea, N-ethyl-N-nitroso-	
U177	684-93-5	Urea, N-methyl-N-nitroso-	
U043	75-01-4	Vinyl chloride	
U248	81-81-2	Warfarin, and salts, when present at a concentration	

Table 205b			
EPA Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
		of 0.3% or less	
U239	1330-20-7	Xylene	(I)
U200	50-55-5	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxy-benzoyl)oxy]-, methyl ester	
U249	1314-84-7	Zinc phosphide, when present at concentration 10% or less	

R 299.9226 Table 205c; discarded commercial chemical products; off-specification species; container residues; and spill residues thereof as toxic hazardous wastes.

Rule 226. Table 205c reads as follows:

Table 205c			
Michigan Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
001U	50-76-0	Actinomycin D	
002U	107-05-1	Allyl chloride	
003U	117-79-3	2-aminoanthraquinone	
004U	60-09-3	Aminoazobenzene	
005U	97-56-3	O-aminoazotoluene	
007U	132-32-1	3-amino-9-ethyl carbazole	
011U	90-04-0	o-Anisidine	
012U	134-29-2	o-Anisidine hydrochloride	
014U	1397-94-0	Antimycin A	
020U	1689-84-5	Bromoxynil	
160U	106-99-0	1,3-Butadiene	
023U	133-06-2	Captan	
027U	786-19-6	Carbophenothion	
029U	2921-88-2	Chloropyrifos	
032U	7782-50-5	Chlorine gas	
033U	107-07-3	2-Chloroethanol	
150U	106-48-9	p-chlorophenol	
036U	5131-60-2	4-chloro-m-phenylenediamine	
038U	126-99-8	Chloroprene	
151U	96-79-4	5-chloro-o-toluidene	
040U	1420-04-8	Clonitralid	
042U	56-72-4	Coumasphos	
046U	66-81-9	Cycloheximide	
051U	333-41-5	Diazinon	
052U	117-80-6	Dichlone	
054U	62-73-7	Dichlorvos	
056U	64-67-5	Diethyl sulfate	

Table 205c			
Michigan Hazardous Waste Number	Chemical Abstract Services Number	Substance	Hazard Code
165U	105-55-5	N,N'-Diethylthiourea	
057U	39300-45-3	Dinocap	
061U	563-12-2	Ethion	
068U	680-31-9	Hexamethyl phosphoramide	
070U	123-31-9	Hydroquinone	
073U	54-85-3	Isonicotinic acid hydrazide	
074U	463-51-4	Ketene	
075U	78-97-7	Lactonitril	
076U	21609-90-5	Leptophos	
078U	569-64-2	Malachite green	
079U	121-75-5	Malathion	
086U	90-12-0	1-Methylnaphthalene	
094U	300-76-5	Naled	
097U	61-57-4	Niridazole	
098U	139-94-6	Nithiazide	
100U	99-59-2	Nitro-o-anisidine	
104U	51-75-2	Nitrogen mustard	
106U	156-10-5	p-Nitrosodiphenylamine	
108U	135-20-6	N-nitroso-N-phenylhydroxylamine, ammonium salt	
169U	29082-74-4	Octachlorostyrene	
110U	301-12-2	Oxydemeton-methyl	
111U	1910-42-5	Paraquat dichloride	
112U	79-21-0	Peroxyacetic acid	
113U	136-40-3	Phenazopyridine hydrochloride	
115U	50-06-6	Phenobarbitol	
116U	57-41-0	Phenytoin	
117U	630-93-3	Phenytoin sodium	
118U	4104-14-7	Phosazetim	
119U	732-11-6	Phosmet	
124U	57-57-8	Propiolactone	
127U	51-52-5	Propylthiouracil	
128U	83-749-4	Rotenone	
129U	57-56-7	Semicarbazide	
170U	563-41-7	Semicarbazide hydrochloride	
131U	100-42-5	Styrene	
136U	13071-79-9	Terbufos	
138U	139-65-1	4,4'-Thiodianiline	
154U	56-35-9	Bis(tri-n-butyl tin) oxide	
171U	688-73-3	Tributyltin (and other salts and esters)	
142U	1582-09-8	Trifluralin	
143U	137-17-7	2,4,5-Trimethylaniline	
175U	593-60-2	Vinyl bromide	

R 299.9227 Deletion of certain hazardous waste numbers after equipment cleaning and replacement.

Rule 227. (1) Wastes from wood preserving processes at plants that do not resume or initiate the use of chlorophenolic preservatives will not meet the listing description of F032 once the generator has met all of the requirements of subrules (2) to (5) of this rule. These wastes may, however, continue to meet another hazardous waste listing description or may exhibit 1 or more of the hazardous waste characteristics.

(2) 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 environment. In cleaning or replacing the process equipment, the generator shall do 1 of the following:

(a) Prepare and follow a process equipment cleaning plan and clean process equipment in accordance with the provisions of subrule (3) of this rule.

(b) Prepare and follow a process equipment replacement plan and replace process equipment in accordance with the provisions of subrule (4) of this rule.

(c) Document that previous process equipment cleaning or replacement, or both, was performed in accordance with the provisions of subrule (3) or (4), or both, of this rule and occurred after cessation of the use of chlorophenolic preservatives.

(3) In cleaning the process equipment that may have come into contact with chlorophenolic formulations, the generator shall do all of the following:

(a) Prepare and sign a written process equipment cleaning plan that describes all of the following:

(i) The process equipment to be cleaned.

(ii) The process equipment cleaning method or methods.

(iii) The solvent to be used in cleaning the process equipment.

(iv) How the solvent rinses will be tested.

(v) How the cleaning residues will be managed and disposed of.

(b) Clean the process equipment as follows:

(i) Remove all visible residues from the process equipment.

(ii) Rinse process equipment with an appropriate solvent until dioxins and dibenzofurans are not detected in the final solvent rinse.

(c) Test the rinses in accordance with an appropriate method in accordance with 40 C.F.R. §261.35(b)(2)(iii).

(d) Manage all residues from the cleaning process as F032 waste.

(4) In replacing the process equipment that may have come into contact with chlorophenolic formulations, the generator shall do both of the following:

(a) Prepare and sign a written process equipment replacement plan that describes all of the following:

(i) The process equipment to be replaced.

(ii) The process equipment replacement method or methods.

(iii) How the process equipment will be managed and disposed of.

(b) Manage the discarded process equipment as F032 waste.

(5) The generator shall maintain all of the following information that documents the cleaning and replacement activities as part of the operating record:

(a) The name and address of the plant.

(b) Formulations previously used and the date on which their use ceased in each process at the plant.

(c) Formulations currently used in each process at the plant.

(d) The equipment cleaning or replacement plan.
(e) The name and address of any persons who conducted the cleaning and replacement.
(f) The dates on which the cleaning and replacement were accomplished.
(g) The dates of sampling and testing.
(h) A description of the sampling handling and preparation techniques, including the techniques that are used for all of the following:
(i) Extraction.
(ii) Containerization.
(iii) Preservation.
(iv) Chain-of-custody of the samples.
(i) A description of the tests performed, the date the tests were performed, and the results of the tests.
(j) The names and model numbers of the instruments used in performing the tests.
(k) Quality assurance/quality control documentation.
(l) A statement which is signed by the generator or the generator's authorized representative and which contains the following language: "I certify under penalty of law that all process equipment required to be cleaned or replaced under R 299.9227 was cleaned or replaced as represented in the equipment cleaning and/or replacement plan and accompanying documentation. I am aware that there are significant penalties for providing false information, including the possibility of fine or imprisonment."
(6) The provisions of 40 C.F.R. §261.35(b)(2)(iii) are adopted by reference in R 299.11003.

R 299.9228 Universal wastes.
Rule 228. (1) This rule provides an alternate set of standards under which universal wastes may be managed instead of full regulation as hazardous waste under these rules. The requirements of this rule apply to the universal wastes identified in this subrule and to persons managing the universal wastes. Universal wastes that are not managed pursuant to this rule are subject to full regulation as hazardous waste under these rules. Except as provided in subrule (2) of this rule, all of the following universal wastes are exempt from full regulation as hazardous waste under these rules if they are managed pursuant to the requirements of this rule:
(a) A battery, including a spent lead-acid battery that is not managed pursuant to R 299.9804.
(b) A pesticide, including both of the following:
(i) A recalled pesticide, including the following:
(A) A stock of a suspended and cancelled pesticide that is part of a voluntary or mandatory recall under section 19(b) of the FIFRA, 7 USC 136q, including, but not limited to, a stock owned by the registrant responsible for conducting the recall.
(B) A stock of a suspended or cancelled pesticide, or of a pesticide that is not in compliance with the FIFRA, that is part of a voluntary recall by the registrant.
(ii) A stock of an unused pesticide product other than a product specified in paragraph (i) of this subdivision that is collected and managed as part of a waste pesticide collection program.
(c) A thermostat.
(d) A mercury switch.
(e) A mercury thermometer.
(f) A waste device that contains only elemental mercury as the hazardous waste constituent.
(g) A lamp.
(h) A pharmaceutical.
(i) Consumer electronics.
(j) Antifreeze.
(k) An aerosol can.

(2) The requirements of this rule do not apply to any of the following:
(a) A spent lead-acid battery that is managed pursuant to R 299.9804.
(b) A battery that is not a waste under part 2 of these rules. A used battery becomes a waste when it is discarded. An unused battery becomes a waste on the date the universal waste handler decides to discard it.
(c) A battery that is not hazardous waste. A battery is a hazardous waste if it exhibits 1 or more of the hazardous characteristics identified in R 299.9212.
(d) A pesticide identified in subrule (1) of this rule that is managed by farmers in compliance with R 299.9204(3)(b).
(e) A pesticide that does not meet the requirements in subrule (1) of this rule. The pesticide must be managed pursuant to parts 2 to 8 of these rules, except that aerosol cans that contain pesticides may be managed as aerosol cans universal waste under this rule.
(f) A pesticide that is not a waste under part 2 of these rules. A recalled pesticide becomes a waste on the first date on which the generator of the pesticide agrees to participate in the recall and the person conducting the recall decides to discard the pesticide. An unused pesticide becomes a waste on the date that the generator decides to discard it. The following pesticides are not wastes:
(i) A recalled pesticide if the person conducting the recall is in compliance with either of the following provisions:
(A) The person has not made a decision to discard the pesticide. Until a decision is made, the pesticide does not meet the definition of a waste under R 299.9202 and, therefore, is not considered a hazardous waste subject to regulations under these rules. The pesticide remains subject to the requirements of the FIFRA.
(B) The person has made a decision to use a management option that does not result in the pesticide meeting the definition of a waste under R 299.9202. The pesticide, including a recalled pesticide that is exported to a foreign destinations for use or reuse, remains subject to the requirements of the FIFRA.
(ii) An unused pesticide product if the generator of the unused pesticide product has not decided to discard the product. The pesticide product remains subject to the requirements of the FIFRA.
(g) A pesticide that is not hazardous waste. A pesticide is a hazardous waste if it is listed under R 299.9213 or R 299.9214 or if it exhibits 1 or more of the hazardous characteristics identified in R 299.9212.
(h) A thermostat, mercury switch, mercury thermometer, or a waste device that contains only elemental mercury as the hazardous waste constituent that is not a waste under part 2 of these rules. A used thermostat, mercury switch, mercury thermometer, or a used waste device that contains only elemental mercury as the hazardous waste constituent becomes a waste on the date it is discarded. An unused thermostat, mercury switch, mercury thermometer, and an unused waste device that contains only elemental mercury as the hazardous waste constituent becomes a waste on the date that the universal waste handler decides to discard it.
(i) A thermostat, mercury switch, mercury thermometer, and a waste device that contains only elemental mercury as the hazardous waste constituent that is not hazardous waste. A thermostat, mercury switch, mercury thermometer, and a waste device that contains only elemental mercury as the hazardous waste constituent is a hazardous waste if it exhibits 1 or more of the hazardous characteristics identified in R 299.9212.
(j) A lamp that is not a waste under part 2 of these rules. A used lamp becomes a waste on the date that the universal waste handler permanently removes it from its fixture. An unused lamp becomes a waste on the date that the universal waste handler decides to discard it.
(k) A lamp that is not a hazardous waste. A lamp is a hazardous waste if it exhibits 1 or more of the hazardous characteristics identified in R 299.9212.
(l) A pharmaceutical that is not a waste under part 2 of these rules. An unused pharmaceutical

becomes a waste on the date that the universal waste handler decides to discard it.

(m) A pharmaceutical that is not a hazardous waste. A waste pharmaceutical is a hazardous waste if it is listed under R 299.9213 or R 299.214 or if it exhibits 1 or more hazardous waste characteristics under R 299.9212.

(n) Consumer electronics that are not a waste under part 2 of these rules. A consumer electronic becomes a waste on the date that the universal waste handler decides to discard it.

(o) Consumer electronics that are not a hazardous waste. A consumer electronic is a hazardous waste if it is listed under R 299.9213 or R 299.214, or if it exhibits 1 or more hazardous waste characteristics under R 299.9212.

(p) Antifreeze that is not a waste under part 2 of these rules. Used antifreeze becomes a waste when it is discarded. Unused antifreeze becomes a waste on the date that the universal waste handler decides to discard it.

(q) Antifreeze that is not a hazardous waste. Antifreeze is a hazardous waste if it is listed in R 299.9213 or R 299.9214, or if it exhibits 1 or more hazardous waste characteristics under R 299.9212.

(r) Aerosol cans that are not a waste under part 2 of these rules. An unused aerosol can becomes a waste on the date the universal waste handler decides to discard it. A used aerosol can becomes a waste when it is discarded.

(s) Aerosol cans that are not a hazardous waste. An aerosol can is a hazardous waste if it contains a substance that is listed in R 299.9213 or R 299.9214, or if it exhibits 1 or more hazardous waste characteristics under R 299.9212.

(t) An aerosol can that is empty under R 299.9207.

(3) A person that manages household wastes that are exempt from regulation under R 299.9204(2)(a) and are also of the same type as the universal wastes identified in subrule (1) of this rule or very small quantity generator wastes that are exempt from regulation under R 299.9304 and are also of the same type as the universal wastes identified in subrule (1) of this rule may, at the person's option, manage the wastes under this rule. A person who commingles household wastes or very small quantity generator wastes with universal waste regulated pursuant to this rule shall manage the commingled waste under the requirements of this rule.

(4) A universal waste small quantity handler shall comply with all of the following requirements:

(a) The requirements of 40 CFR part 273, subpart B, except 273.10 and 273.18(b).

(b) If the universal waste small quantity handler is self-transporting universal waste offsite, then the handler becomes the universal waste transporter for the self-transportation activities and shall comply with the requirements of subrule (6) of this rule while transporting the universal wastes.

(c) If the universal waste small quantity handler handles mercury switches, mercury thermometers, or waste devices that contain only elemental mercury as the hazardous waste constituent, then 40 CFR 273.13(c) applies to the mercury switches, mercury thermometers, and waste devices that contain only elemental mercury as the hazardous waste constituent.

(d) If the universal waste small quantity handler manages pharmaceuticals, then all of the following additional requirements must apply:

(i) The pharmaceuticals must be managed in a manner that prevents releases of any universal waste or component of a universal waste to the environment. The pharmaceuticals must be contained in a container that remains closed, except to add or remove universal waste, is structurally sound, is compatible with the pharmaceutical, and lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable circumstances, or if the container does not meet these conditions, is overpacked in a container that does meet these conditions.

(ii) If a release of pharmaceuticals or component of pharmaceuticals occurs, the release must be immediately cleaned up and properly characterized for disposal.

(iii) A universal waste handler may disassemble packaging and sort pharmaceuticals.

(iv) Incompatible pharmaceuticals must be segregated. Adequate distance must be employed to prevent the contact of incompatible materials.

(e) If the universal waste small quantity handler manages consumer electronics, then all of the following additional requirements apply:

(i) The consumer electronics must be managed in a manner that prevents breakage or the release of any universal waste or components of universal waste by containing the consumer electronics in packaging that will prevent breakage during normal handling conditions.

(ii) Label the outer packaging or container with the words "universal waste consumer electronics" or "universal waste electronics."

(iii) Properly contain, classify, and dispose of releases and potential releases of consumer electronics and residues.

(f) A universal waste small quantity handler handling consumer electronics may perform any of the following activities and shall still be regulated as a universal waste small quantity handler:

(i) Repair the consumer electronics for potential direct reuse.

(ii) Remove other universal wastes from the consumer electronics.

(iii) Remove individual modular components for direct reuse.

(g) If the universal waste small quantity handler manages antifreeze, then all of the following additional requirements must apply:

(i) The antifreeze must be managed in a manner that prevents releases of any universal waste or component of a universal waste to the environment.

(ii) The antifreeze must be contained in 1 or more of the following manners:

(A) A container that remains closed, except to add or remove universal waste, is structurally sound, is compatible with the antifreeze, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(B) A container that does not meet the requirements of subparagraph (A) of this paragraph, if the container is overpacked in a container that does meet the requirements of subparagraph (A) of this paragraph.

(C) A tank that meets the requirements of 40 CFR part 265, subpart J, except for 40 CFR 265.197(c), and 265.200.

(D) A transport vehicle or vessel that remains closed, except to add or remove universal waste, is structurally sound, is compatible with the antifreeze, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonable foreseeable conditions.

(iii) If a release of antifreeze or a component of antifreeze occurs, the release must be immediately cleaned up and properly characterized for disposal.

(iv) The containers or tanks used to manage the antifreeze must be labeled with the words "universal waste antifreeze," "waste antifreeze," or "used antifreeze."

(5) A universal waste large quantity handler shall comply with all of the following requirements:

(a) Maintain the universal waste large quantity handler designation through the end of the calendar year in which a total of 5,000 kilograms or more of universal waste is accumulated.

(b) The requirements of 40 CFR part 273, subpart C, except 273.30 and 273.38(b).

(c) If the universal waste large quantity handler is self-transporting universal waste off site, then the handler becomes the universal waste transporter for the self-transportation activities and shall comply with the requirements of subrule (6) of this rule while transporting the universal wastes.

(d) If the universal waste large quantity handler handles mercury switches, mercury thermometers, or waste devices that contain only elemental mercury as the hazardous waste constituent, then 40 CFR 273.33(c) applies to the mercury switches, mercury thermometers, and waste devices that contain only elemental mercury as the hazardous waste constituent.

(e) If the universal waste large quantity handler handles pharmaceuticals, all of the additional requirements of subrule (4)(d) of this rule.

(f) If the universal waste large quantity handler handles consumer electronics, all of the additional requirements of subrules (4)(e) and (f) of this rule.

(g) If the universal waste large quantity handler handles antifreeze, all of the additional requirements of subrule (4)(g) of this rule.

(6) A universal waste transporter shall comply with both of the following requirements:

(a) The requirements of 40 CFR part 273, subpart D, except 273.50 and 273.53.

(b) Store universal wastes at a universal waste transfer facility for 10 days or less. If the transporter stores universal wastes for more than 10 days, then the transporter becomes a universal waste handler and shall comply with the applicable requirements of subrules (4) and (5) of this rule while storing the universal wastes.

(7) Except as provided for in subrules (8) and (9) of this rule, an owner or operator of a destination facility shall comply with all of the following requirements:

(a) The requirements of parts 5 to 8 of these rules and the notification requirements under section 3010 of RCRA, 42 USC 6930.

(b) The requirements of 40 CFR 273.61 and 273.62.

(c) The requirements of the act and these rules if the owner or operator generates waste as a result of recycling universal waste.

(8) An owner or operator of a destination facility that recycles a particular universal waste without storing the universal waste before recycling shall comply with R 299.9206(1)(c).

(9) An owner or operator of a destination facility that stores lamps before recycling the lamps at the facility shall comply with R 299.9206(5).

(10) A person who manages universal waste that is imported from a foreign country into the United States shall comply with the following applicable requirements immediately after the universal waste enters the United States:

(a) The requirements of subrule (4) of this rule if a small quantity handler of universal waste.

(b) The requirements of subrule (5) of this rule if a large quantity handler of universal waste.

(c) The requirements of subrule (6) of this rule if a transporter of universal waste.

(d) The requirements of subrules (7) to (9) of this rule if a universal waste destination facility.

(e) The requirements of this rule and R 299.9314 if managing universal waste that is imported from an Organization for Economic Cooperation and Development country.

(11) 40 CFR part 273, subparts B to E, except 273.10, 273.18(b), 273.30, 273.38(b), 273.50, 273.53, and 273.60, are adopted by reference in R 299.11003. For the purposes of adoption, the term "department" replaces the term "EPA," except in 40 CFR 273.32(a)(3), the term "director" replaces the term "regional administrator," the term "R 299.9212" replaces the term "40 CFR part 261, subpart C," the term "R 299.9302" replaces the term "40 CFR 262.11," the term "R 299.9304, R 299.9305, R 299.9306, or R 299.9307" replaces the term “40 CFR 262.14, 15, 16, or 17," the term "R 299.9306~~5~~ to R 299.9307" replaces the term "§262.34," the term "part 3 of these rules" replaces the term "40 CFR part 262," and the term "parts 2 to 8 of these rules" replaces the term "40 CFR parts 260 through 272."

R 299.9229 Petitions to amend list of universal wastes.

Rule 229. (1) A person who seeks to add a hazardous waste or a category of hazardous waste to the list of universal wastes in R 299.9228 may petition the department for a regulatory amendment under this rule and 40 C.F.R. §260.20.

(2) A petition filed pursuant this rule shall include all of the following:

(a) A demonstration that regulation under the provisions of R 299.9228 is appropriate for the waste or category of waste.

(b) A demonstration that regulation under the provisions of R 299.9228 will improve the management practices for the waste or category of waste.

(c) A demonstration that regulation under the provisions of R 299.9228 will improve implementation of the hazardous waste management program.

(d) The information listed in 40 C.F.R. §260.20(b).

(e) Information addressing the following factors as appropriate for the waste or category of waste:

(i) Whether the waste or category of waste, as generated by a wide variety of generators, is listed pursuant to the provisions of R 299.9213 or R 299.9214 or, if not listed, what proportion of the hazardous waste stream exhibits 1 or more of the hazardous characteristics identified in R 299.9212. If a characteristic hazardous waste is added to the list of universal wastes in R 299.9228 using a generic name to identify the waste category, then the definition of the universal waste shall include only the hazardous waste portion of the waste category. Only the portion of the waste stream that exhibits 1 or more hazardous characteristics is subject to the universal waste requirements of R 299.9228.

(ii) Whether the waste or category of waste is commonly generated by a wide variety of establishments or whether it is exclusive to a specific industry or group of industries.

(iii) Whether the waste or category of waste is generated by a large number of generators and is frequently generated in relatively small quantities by each generator.

(iv) Whether systems to be used for collecting the waste or category of waste would ensure close stewardship of the waste.

(v) Whether the risk posed by the waste or category of waste during accumulation and transport is relatively low compared to other hazardous wastes and whether specific management standards proposed or referenced by the petitioner would be protective of human health and the environment during the accumulation and transport.

(vi) Whether regulation of the waste or category of waste under R 299.9228 will increase the likelihood that the waste will be diverted from nonhazardous waste management systems to recycling, treatment, or disposal in compliance with subtitle C of RCRA.

(vii) Whether regulation of the waste or category of waste under R 299.9228 will improve implementation of, and compliance with, the hazardous waste management program.

(viii) Other factors as may be appropriate.

(3) The department will evaluate and grant or deny a petition filed pursuant to this rule using the factors listed in subrule (2) of this rule. The department may require additional information as necessary to evaluate the merits of the petition. The decision to grant or deny a petition will be based on the weight of evidence showing that regulation under R 299.9228 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 management program.

(4) The provisions of 40 C.F.R. §260.20 are adopted by reference in R 299.11003.

R 299.9230 Rescinded.

R 299.9231 Exclusions and exemptions for CRTs.

Rule 231. (1) Used, broken CRTs are not considered wastes prior to processing if all of the following conditions are met:

(a) The CRTs are destined for recycling.

(b) The CRTs are stored in a building with a roof, floor, and walls or are placed in a container that is constructed, filled, and closed to minimize the release of CRT glass, including fine solid materials, to the environment.

(c) Each container in which the CRTs are contained is labeled or marked clearly with the phrase "Do not mix with other glass materials" and either "Used cathode ray tube(s)-contains leaded glass" or "Leaded glass from televisions or computers."

(d) The CRTs are transported in a container that is constructed, filled, and closed to minimize the

release of CRT glass, including fine solid materials, to the environment and the container is labeled in accordance with the requirements of subdivision (c) of this subrule.

(e) The CRTs are not speculatively accumulated or used in a manner constituting disposal. If the CRTs are used in a manner constituting disposal, they shall be managed in accordance with R 299.9801.

(f) The requirements of 40 C.F.R. §261.39(a)(5) if the CRTs are being exported.

(2) Used, broken CRTs undergoing processing are not considered wastes if all of the following conditions are met:

(a) The requirements of subdivision (e) of subrule (1) of this rule.

(b) All CRT processing shall be performed within a building with a roof, floor, and walls.

(c) All CRT processing shall be performed at temperatures that do not volatize the lead from the CRTs.

(3) Glass from used CRTs that is destined for recycling at a CRT glass manufacturer or lead smelter after processing is not a waste unless it is speculatively accumulated.

(4) Glass from used CRTs that is used in a manner constituting disposal is not excluded from regulation under this rule and shall be subject to the requirements of R 299.9801.

(5) Used, intact CRTs exported for recycling are not considered wastes if all of the following conditions are met:

(a) The requirements of 40 C.F.R. §261.39(a)(5).

(b) The CRTs are not speculatively accumulated.

(6) Persons who export used, intact CRTs for reuse shall comply with the requirements of 40 C.F.R. §261.41.

(7) The provisions of 40 C.F.R. §§261.39(a)(5) and 261.41 are adopted by reference in R 299.11003. For the purposes of these adoptions, the term "site identification number" shall replace the term "EPA ID number."

R 299.9232 Legitimate recycling of hazardous secondary materials.

Rule 232. (1) The recycling of a hazardous secondary material for the purpose of exclusion or exemption from the regulation as a hazardous waste must be legitimate. A hazardous secondary material that is not legitimately recycled is a discarded material and, therefore, a waste. In determining if the recycling is legitimate, a person shall address all of the following requirements and consider the requirements of subrule (2) of this rule.

(a) Legitimate recycling must involve a hazardous secondary material that provides a useful contribution to the recycling process or to a product or intermediate of the recycling process. A hazardous secondary material provides a useful contribution if it meets 1 of the following requirements:

(i) It contributes a valuable ingredient to a product or intermediate.

(ii) It replaces a catalyst or carrier in the recycling process.

(iii) It is the source of a valuable constituent recovered in the recycling process.

(iv) It is recovered or regenerated by the recycling process.

(v) It is used as an effective substitute for a commercial product.

(b) The recycling process must produce a valuable product or intermediate. A product or intermediate is valuable if it meets 1 of the following requirements:

(i) It is sold to a third party.

(ii) It is 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.

(c) The generator and the recycler shall manage the hazardous secondary material as a valuable commodity when it is under their control. If there is an analogous raw material, the hazardous secondary material must be managed, at a minimum, in a manner consistent with the management of

the raw material or in an equally protective manner. If there is no analogous raw material, the hazardous secondary material must be contained. A hazardous secondary material that is released to the environment and is not recovered immediately is discarded.

(2) A person making a determination regarding the legitimacy of a specific recycling activity shall consider the following factors:

(a) The product of the recycling process does not do any of the following:

(i) Contain significant concentrations of any hazardous constituents found in appendix VIII of 40 CFR part 261 at levels that are not found in analogous products.

(ii) Contain concentrations of hazardous constituents found in appendix VIII of 40 CFR part 261 at levels that are significantly elevated from those found in analogous products.

(iii) Exhibit a hazardous characteristic as defined in R 299.9212 that analogous products do not exhibit.

(b) In making a determination that a hazardous secondary material is legitimately recycled, a person shall evaluate all factors and consider the legitimacy as a whole. If the evaluation of the considerations in subdivision (a) of this subrule indicate that the factor is not met, it may be an indication that the material is not legitimately recycled. The factor in subdivision (a) of this subrule does not have to be met for the recycling to be considered legitimate. In evaluating the extent to which this factor is met and in determining whether a process that does not meet this factor is still legitimate, persons may consider exposure from toxics in the product, the bioavailability of the toxics in the product, and other relevant considerations.

R 299.9233 Standards applicable to hazardous secondary materials excluded under the remanufacturing exclusion.

Rule 233. (1) Hazardous secondary materials excluded under the remanufacturing exclusion in R 299.9204(1)(cc) and stored in containers shall be managed in accordance with 40 C.F.R. part 261, subpart I.

(2) Hazardous secondary materials excluded under the remanufacturing exclusion in R 299.9204(1)(cc) and stored or treated in tank systems shall be managed in accordance with 40 C.F.R. part 261, subpart J.

(3) Hazardous secondary materials excluded under the remanufacturing exclusion in R 299.9204(1)(cc) shall be managed in compliance with the applicable regulations under 40 C.F.R. part 261, subparts AA, BB, and CC.

(4) The provisions of 40 C.F.R. part 261, subparts I, J, AA, BB, and CC are adopted by reference in R 299.11003. For the purposes of this adoption, the reference "R 299.9204(1)(cc)" shall replace the reference to "§261.4(a)(27)," the reference "R 299.9108" shall replace the reference to "§260.10" with respect to tank systems, the word "director" shall replace the words "regional administrator," the words "these rules" shall replace the words "parts 261 through 266, 268, 270, 271, and 124 of this chapter," the reference "R 299.11002" shall replace the reference to "§260.11" with respect to NFPA documents, the words "part 5 of these rules" shall replace the reference to "40 CFR part 270," the words "40 CFR part 266, subpart H and R 299.9808" shall replace the reference to "40 CFR part 266, subpart H," the reference "R 299.11001" shall replace the reference to "§260.11" with respect to APTI courses, ASTM methods and American Petroleum Institute Publications, and the words "parts 1 to 8 of these rules" shall replace the references to "40 CFR parts 260-266" and "40 CFR parts 260 through 266 of this chapter."

R 299.9234 Standards applicable to hazardous secondary materials excluded under the reclamation exclusion.

Rule 234. (1) Hazardous secondary materials excluded under the reclamation exclusions in R 299.9204(1)(aa) or (bb) shall be managed in accordance with 40 C.F.R. part 261, subpart M.

(2) The provisions of 40 C.F.R. part 261, subpart M are adopted by reference in R 299.11003. For the purposes of this adoption, the reference "R 299.9204(1)(aa) or (bb)" shall replace the reference to "§261.4(a)(23) and/or (24)," the word "director" shall replace the words "regional administrator," and the words "parts 3, 4, and 6 of these rules" shall replace the words "parts 262, 263, and 265 of this chapter."

PART 3. GENERATORS OF HAZARDOUS WASTE

R 299.9301 Applicability.

Rule 301. (1) This part establishes requirements for generators of hazardous waste. A person who generates hazardous waste shall comply with all of the following independent requirements:

(a) For a very small quantity generator, the requirements of R 299.9302(1) and R 299.9303.

(b) For a small quantity generator, the requirements of R 299.9302, R 299.9303, R 299.9308 to R 299.9310, R 299.9311(1), and R 299.9314.

(c) For a large quantity generator, the requirements of R 299.9302, R 299.9303, R 299.9308 to R 299.9312, and R 299.9314.

(2) A generator shall use the provisions of R 299.9303 to determine the applicability of the requirements of this part that are dependent on calculations of the quantity of hazardous waste generated each calendar month.

(3) A generator who treats, stores, or disposes of hazardous waste on-site shall comply with the R 299.9302, R 299.9305 to R 299.9308, R 299.9311, and R 299.9312 and the applicable requirements of parts 5, 6, 7, and 8 of these rules.

(4) Any person who imports hazardous waste into the United States shall comply with the standards in this part that are applicable to generators.

(5) An owner or operator who initiates a shipment of hazardous waste from a treatment, storage, or disposal facility comply with the generator standards established in this part.

(6) In addition to complying with this part, a generator who uses his or her own vehicle to transport hazardous waste shall comply with the applicable requirements of part 4 of these rules.

(7) Any person who exports or imports hazardous wastes shall comply with R 299.9308 and R 299.9314.

(8) Persons responding to an explosives or munitions emergency in accordance with R 299.9503(2) are not required to comply with the standards in this part.

(9) Laboratories owned by an eligible academic entity that chose to be subject to R 299.9313 are not subject to the following requirements:

(a) The independent requirements of R 299.9302, R 299.9305, and R 299.9311(1), except as provided in R 299.9315.

(b) R 299.9304, except as provided in R 299.9315.

R 299.9302 Hazardous waste determination.

Rule 302. (1) A person who generates a waste as defined in R 299.9202 shall make an accurate determination if that waste is a hazardous waste to ensure the waste is properly managed under these rules. A hazardous waste determination must be made using the following method:

(a) The hazardous waste determination for each waste must be made at the point of waste generation, before dilution, mixing, or other alteration of the waste occurs, and at any time in the course of its management that it has, or may have, changed its properties as a result of exposure to the environment or other factors that may change the properties of the waste such that the classification of the waste under these rules may change.

(b) A generator shall determine if the waste is excluded from regulation under R 299.9204(1) or (2).

(c) If the waste is not excluded, the generator shall determine if the waste is listed as hazardous under R 299.9213 and R 299.9214. Acceptable knowledge that may be used in making an accurate determination if the waste is listed may include the waste origin, composition, the process producing the waste, feedstock, and other reliable and relevant information. If the waste is listed, the generator may file a delisting petition under 40 CFR 260.20 and 260.22 to demonstrate that the waste from this specific site or operation is not a hazardous waste.

(d) The generator shall determine if the waste meets 1 or more of the characteristics of hazardous waste under R 299.9212 by doing either of the following, or a combination of both:

(i) Applying knowledge of the hazardous characteristics of the waste given the materials or processes used to generate the waste. Acceptable knowledge that may be used in making an accurate determination if the waste exhibits 1 or more characteristics of a hazardous waste includes process knowledge; feedstocks and other process inputs; knowledge of products, by-products, and intermediates produced by the manufacturing process; chemical or physical characterization of the wastes; information on the chemical and physical properties of the chemicals used or produced by the process or otherwise contained in the waste; testing that illustrates the properties of the waste; or other reliable and relevant information about the properties of the waste or its constituents. A test other than a test method set forth in R 299.9212 or according to an equivalent method approved by the director under R 299.9215 may be used as part of the generator's knowledge to determine if a waste exhibits a characteristic of a hazardous waste. The tests do not, by themselves, provide definitive results. Any test results that a generator may use for this determination must be based on testing that was conducted using representative samples of the waste.

(ii) If available knowledge is inadequate to make an accurate determination, the generator shall test the waste according to the methods set forth in R 299.9212 or according to an equivalent method approved by the director under R 299.9215 and in accordance with the following:

(A) A generator testing his waste shall obtain a representative sample of the waste for testing.

(B) If the test method is set forth in R 299.9212 or approved under R 299.9215, the results of the regulatory test, if properly performed, are definitive for determining the regulatory status of the waste.

(2) If the waste is determined to be hazardous, the generator shall refer to parts 2 to 6 and 8 of these rules for possible exclusions or restrictions that pertain to the management of his or her specific waste.

(3) If the waste is determined to be hazardous, then both small and large quantity generators shall identify all applicable hazardous waste numbers.

(4) If the general character of a waste changes due to changes in the materials or processes involved in its generation, the evaluation under subrule (1) of this rule must be repeated immediately by the generator.

R 299.9303 Generator category determination.

Rule 303. (1) A generator shall determine its generator category. A generator's category is based on the amount of hazardous waste generated each month and may change from month to month. This rule sets forth procedures to determine whether a generator is a very small quantity generator, a small quantity generator, or a large quantity generator for a particular month.

Table 1 Generator Categories Based on Quantity of Waste Generated in a Calendar Month

Acute Hazardous Waste	Non-acute Hazardous Waste	Severely Toxic Hazardous Waste	Residues from Cleanup of Acute or Severely Toxic Hazardous Waste	Generator Category
> 1 kg	Any amount	> 1 kg	Any amount	Large quantity generator
Any amount	≥ 1,000 kg	Any amount	Any amount	Large quantity generator
Any amount	Any amount	Any amount	> 100 kg	Large quantity generator
≤ 1 kg	> 100 kg and < 1,000 kg	≤ 1 kg	≤ 100 kg	Small quantity generator
≤ 1 kg	≤ 100 kg	≤ 1 kg	≤ 100 kg	Very small quantity generator

(2) A generator who generates acute hazardous waste, non-acute hazardous waste, or severely toxic hazardous waste in a calendar month shall determine its generator category for that month by doing all of the following.

(a) Counting the total amount of hazardous waste generated in the calendar month.

(b) Subtracting from the total any amounts of waste exempt from counting as described in subrules (4) and (5) of this rule.

(c) Determining the resulting generator category for the hazardous waste generated using table 1 of this rule.

(3) A generator who generates acute or severely toxic hazardous waste and non-acute hazardous waste in the same calendar month shall determine its generator category for that month by doing all of the following:

(a) Counting separately the total amount of acute hazardous waste, the total amount of severely toxic hazardous waste, and the total amount of non-acute hazardous waste generated in the calendar month.

(b) Subtracting from each total any amounts of waste exempt from counting as described in subrules (4) and (5) of this rule.

(c) Determining separately the resulting generator categories for the quantities of acute hazardous waste, severely toxic hazardous waste, and non-acute hazardous waste generated using table 1 of this rule.

(d) Comparing the resulting generator categories from subdivision (c) of this subrule and applying the more stringent generator category to the accumulation and management of both non-acute hazardous waste and acute or severely toxic hazardous waste generated for that month.

(4) When making the monthly quantity-based determinations required by this rule, the generator shall include all hazardous waste that it generates, except hazardous waste that:

(a) Is exempt from regulation under R 299.9204(3) to (10), R 299.9206(3), or R 299.9207(1).

(b) Is managed immediately upon generation only in on-site elementary neutralization units, wastewater treatment units, or totally enclosed treatment facilities.

(c) Is recycled, without prior storage or accumulation, only in an on-site process subject to regulation under R 299.9206(1)(c).

(d) Is used oil managed under R 299.9206(4) and R 299.9809 to R 299.9816.

(e) Is spent lead-acid batteries managed under R 299.9804.

(f) Is universal waste managed under R 299.9228.

(g) Is a hazardous waste that is an unused commercial chemical product listed in part 2 of these rules or exhibits 1 or more characteristics in R 299.9212, that is generated solely as a result of a laboratory clean-out conducted at an eligible academic entity under R 299.9315.

(h) Is managed as part of an episodic event in compliance with R 299.9316.

(5) In determining the quantity of hazardous waste generated in a calendar month, a generator need not include any of the following:

(a) Hazardous waste when it is removed from on-site accumulation if the hazardous waste was previously counted once.

(b) Hazardous waste generated by onsite treatment, including reclamation, of the generator's hazardous waste if the hazardous waste that is treated was previously counted once.

(c) Hazardous waste spent materials that are generated, reclaimed, and subsequently reused on site if the spent materials have been previously counted once.

(6) Based on the generator category determined under this rule, the generator shall meet all of the applicable independent requirements listed in R 299.9301. A generator's category also determines which provisions of R 299.9301 to R 299.9307 must be met to obtain an exemption from the licensing, interim status, and operating requirements when accumulating hazardous waste.

(7) Hazardous wastes generated by a very small quantity generator may be mixed with wastes. Very small quantity generators may mix a portion or all its hazardous waste with waste and remain subject to R 299.9304 even though the resultant mixture exceeds the quantity limits identified in the definition of very small quantity generator, unless the mixture exhibits 1 or more of the characteristics of hazardous waste identified in R 299.9212. If the resulting mixture exhibits a characteristic of a hazardous waste, the resultant mixture is a newly-generated hazardous waste. The very small quantity generator shall count both the resultant mixture amount plus the other hazardous waste generated in the calendar month to determine if the total quantity exceeds the very small generator calendar month quantity limits identified in the definition of generator categories. If so, to remain exempt from the licensing, interim status, and operating standards, the very small quantity generator shall meet the conditions for exemption applicable to either a small quantity generator or a large quantity generator. The very small quantity generator shall meet the independent requirements for either a small quantity generator or a large quantity generator. If a very small quantity generator's wastes are mixed with used oil, the mixture is subject to part 8 of these rules. Any material produced from a mixture by processing, blending, or other treatment is also regulated under part 8 of these rules.

(8) Hazardous wastes generated by a small quantity generator or large quantity generator may be mixed with waste. These mixtures are subject to the mixture rule in R 299.9203(1)(c), (2)(b) and (c), and (7); the prohibition of dilution rule in 40 CFR 268.3(a); the land disposal restriction requirements in 40 CFR 268.40 if a characteristic hazardous waste is mixed with a waste so that it no longer exhibits the hazardous characteristic; and the hazardous waste determination requirement in R 299.9302. If the resulting mixture is a hazardous waste, the resultant mixture is a newly-generated hazardous waste. A small quantity generator shall count both the resultant mixture amount and the other hazardous waste generated in the calendar month to determine if the total quantity exceeds the small quantity generator calendar monthly quantity limits identified in the definition of generator categories. If so, to remain exempt from the licensing, interim status, and operating standards, the small quantity generator shall meet the conditions for exemption applicable to a large quantity generator. The small quantity generator shall also comply with the applicable independent requirements for a large quantity generator.

R 299.9304 Conditions for exemption for very small quantity generators.

Rule 304. (1) If a very small quantity generator meets all of the conditions for exemption listed in this rule, the hazardous waste generated by the very small quantity generator is not subject to regulation under parts 3 to 10 of these rules, except R 299.9301 to R 299.9304, and the notification requirements of section 3010 of RCRA, 42 USC 6930, and the very small quantity generator may accumulate hazardous waste on site without complying with the requirements. The conditions for exemption include all of the following:

(a) In a calendar month, the very small quantity generator generates less than or equal to the amounts specified in the definition of "very small quantity generator."

(b) The very small quantity generator complies with R 299.9302(1)(a)-(d).

(c) If the very small quantity generator accumulates at any time greater than 1 kilogram of acute hazardous waste; 1 kilogram of severely toxic hazardous waste; or 100 kilograms of 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 acute or severely toxic hazardous waste listed, all quantities of that acute or severely toxic hazardous waste are subject to both of the following additional conditions for exemption:

(i) The waste is held on site for no more than 90 days beginning on the date when the accumulated wastes exceed the amounts in this subdivision.

(ii) The conditions for exemption in R 299.9307.

(d) If the very small quantity generator accumulates at any time 1,000 kilograms or greater of non-acute hazardous waste, all quantities of that hazardous waste are subject to all of the following additional conditions for exemption:

(i) The waste is held on site for no more than 180 days, or 270 days, if applicable, beginning on the date when the accumulated waste exceed the amounts in this subdivision.

(ii) The quantity of waste accumulated on site never exceeds 6,000 kilograms.

(iii) The conditions for exemption in R 299.9306(1)(b) and (d) to (r), (3), and (4).

(e) A very small quantity generator that accumulates hazardous waste in amounts less than or equal to the limits in subdivisions (c) and (d) of this subrule shall either treat or dispose of its hazardous waste in an on-site facility or ensure delivery to an off-site treatment, storage, or disposal facility. If the facility is located in the United States, it shall comply with 1 of the following requirements:

(i) Be licensed under part 111 of the act, MCL 324.11101 to 324.11153, for that waste type or be operating under R 299.9502(3), (4), or (5).

(ii) Be in another state and be authorized to manage hazardous waste by the state under a hazardous waste management program that is approved under 40 CFR part 271.

(iii) Be in another state and be permitted or licensed under 40 CFR part 270.

(iv) Be in another state and be in interim status under 40 CFR parts 270 and 265.

(v) Be a facility that stores or treats the waste and that is in compliance with the applicable requirements of parts 31, 55, and 115 of the act, MCL 324.3101 to 324.3134, 324.5501 to 324.5542, and 324.11501 to 324.11554.

(vi) Be a disposal facility that is in compliance with the applicable requirements of parts 31, 55, and 115 of the act, MCL 324.3101 to 324.3134, 324.5501 to 324.5542, and 324.11501 to 324.11554.

(vii) Be in another state and be permitted, licensed, or registered by that state to manage municipal waste that, if managed in a municipal waste landfill, is subject to 40 CFR part 258.

(viii) Be in another state and be permitted, licensed, or registered by that state to manage nonmunicipal waste that, if managed in a nonmunicipal waste disposal unit after the effective date of these rules, is subject to 40 CFR 257.5 to 257.30.

(ix) Be a facility that beneficially uses or reuses, or legitimately recycles or reclaims, the waste or treats the waste before the beneficial use or reuse or legitimate recycling or reclamation.

(x) Be an off-site publicly owned treatment works, if the waste is in compliance with all federal, state, and local pretreatment requirements and, if the waste is shipped by vehicle, the conditions of R 299.9503(3)(b) are met.

(xi) For universal waste managed under R 299.9228, be a universal waste handler or destination facility in compliance with R 299.9228.

(xii) Be a large quantity generator under the control of the same person as the very small quantity generator and meet all of the conditions below. As used in this rule, "control" means the power to direct the policies of the generator, whether by the ownership of stock, voting rights, or otherwise, except that contractors who operate generator facilities on behalf of a different person are not considered to "control" the generators. The conditions include all of the following:

(A) The very small quantity generator marks each container of hazardous waste with the words "Hazardous Waste."

(B) The very small quantity generator marks each container of hazardous waste with a description of the waste or the hazardous waste number, and an indication of the hazards of the contents. The indication of the hazards of the contents may include the applicable hazardous waste characteristic(s), the hazard communication consistent with 49 CFR part 172, subpart E or F, a hazard statement or pictogram consistent with 29 CFR 1910.1200, or a chemical hazard label consistent with the NFPA standard no. 704.

(f) The very small quantity generator accumulates waste in an area where the waste is protected

from weather, fire, physical damage, and vandals.

(g) The hazardous waste accumulation is conducted so that hazardous waste or hazardous waste constituents cannot escape by gravity into the soils, directly or indirectly, into surface or groundwaters, or into drains or sewers and so that fugitive emissions are not in violation of part 55 of the act, MCL 324.5501 to 324.5542.

(2) The placement of bulk or noncontainerized liquid hazardous waste or hazardous waste containing free liquids, whether or not sorbents have been added, in any landfill is prohibited.

(3) A very small quantity generator experiencing an episodic event may generate and accumulate hazardous waste in accordance with R 299.9316 instead of R 299.9305 to R 299.9307.

R 299.9305 Satellite accumulation area requirements for small and large quantity generators.

Rule 305. (1) A generator may accumulate as much as 55 gallons of non-acute hazardous waste or either 1 quart of liquid acute hazardous waste or severely toxic hazardous waste or 1 kilogram of solid acute hazardous waste or severely toxic waste in containers at or near any point of generation where wastes initially accumulate and that is under the control of the operator of the process that generates the waste, without an operating license issued under part 111 of the act, MCL 324.11101 to 324.11153, and without complying with parts 5 to 8 of these rules, if all of the conditions for exemption in this rule are met. A generator may comply with the conditions for exemption in this rule instead of complying with the conditions for exemption in R 299.9306(1)(b) to (r) or R 299.9307(1), except as required in this subrule and subrule (2) of this rule. The conditions for exemption for satellite accumulation include all of the following requirements:

(a) If a container holding hazardous waste is not in good condition, or if it begins to leak, the generator immediately transfer the hazardous waste from this container to a container that is in good condition and does not leak, or immediately transfer and manage the waste in a central accumulation area operated in compliance with R 299.9306(1)(b) to (r) or R 299.9307(1).

(b) The generator shall use a container made of or lined with materials that will not react with, and are otherwise compatible with, the hazardous waste to be accumulated, so that the ability of the container to contain the waste is not impaired.

(c) All of the following special standards for incompatible wastes:

(i) Incompatible wastes, or incompatible wastes and materials, must not be placed in the same container unless the requirements of 40 CFR 265.17(b) are met.

(ii) Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material unless the requirements of 40 CFR 265.17(b) are met.

(iii) A container holding a hazardous waste that is incompatible with any waste or other materials accumulated nearby in other containers must be separated from the other materials or protected from them by any practical means.

(d) A container holding hazardous waste must be closed at all times during accumulation, except to add, remove, or consolidate waste or when temporary venting of a container is necessary for the proper operating of equipment or to prevent dangerous situations, such as build-up of extreme pressure.

(e) A generator shall mark or label its container with both the following:

(i) The words "Hazardous Waste."

(ii) A description of the waste or the hazardous waste number, and an indication of the hazards of the contents. The indication of the hazards of the contents may include the applicable hazardous waste characteristic(s), the hazard communication consistent with 49 CFR part 172, subpart E or F, a hazard statement or pictogram consistent with 29 CFR 1910.1200, or a chemical hazard label consistent with the NFPA standard no. 704.

(2) A generator who accumulates either non-acute hazardous waste, acute hazardous waste, or

severely toxic hazardous waste in excess of the amounts listed in subrule (1) of this rule at or near any point of generation shall do 1 or more of the following with respect to that amount of excess waste:

(a) Comply with the applicable central accumulation area requirements in R 299.9306(1)(b) to (r) or R 299.9307(1) within 3 consecutive calendar days.

(b) Remove the excess waste from the satellite accumulation area within 3 consecutive calendar days to 1 or more of the following:

(i) A central accumulation area operated in accordance with the applicable requirements of R 299.9306(1)(b) to (r) or R 299.9307(1).

(ii) An on-site interim status or licensed treatment, storage, or disposal facility.

(iii) An off-site designated facility.

(c) During the 3-consecutive-calendar-day period, continue to comply with subrules (1)(a) to (c) of this rule. The generator shall mark or label each container holding the excess accumulation of hazardous waste with the date the excess amount began accumulating.

(3) All satellite accumulation areas operated by a small quantity generator shall meet the provisions of R 299.9306(1)(f) to (r).

(4) All satellite accumulation areas operated by a large quantity generator shall meet the provisions of 40 CFR part 262, subpart M.

(5) 40 CFR part 262, subpart M is adopted by reference in R 299.11003.

R 299.9306 Conditions for exemption for small quantity generators that accumulate hazardous waste.

Rule 306. (1) A small quantity generator may accumulate hazardous waste on site without an operating license issued under part 111 of the act, MCL 324.11101 to 324.11153, and without complying with parts 5 to 8 of these rules or the notification requirements of section 3010 of RCRA, 45 USC 6930, if all of the following conditions are met:

(a) The small quantity generator generates in a calendar month no more than the amounts specified in the definition of "small quantity generator."

(b) The small quantity generator accumulates hazardous waste on site for no more than 180 days, unless the small quantity generator is in compliance with the conditions for longer accumulation in subrules (3) and (4) of this rule.

(c) The quantity of hazardous waste accumulated on site never exceeds 6,000 kilograms.

(d) The hazardous waste is managed under 1 or more of the following methods:

(i) In containers and the small quantity generator complies with the containment requirements of 40 CFR 264.175 if the quantity of waste accumulated on site exceeds 1,000 kilograms, and with all of the following:

(A) If a container holding hazardous waste is not in good condition, or if it begins to leak, the small quantity generator shall immediately transfer the hazardous waste from this container to a container that is in good condition and does not leak, or immediately manage the waste in some other way that complies with the conditions for exemption of this rule.

(B) Use a container made of or lined with materials that will not react with, and are otherwise compatible with, the hazardous waste to be accumulated, so that the ability of the container to contain the waste is not impaired.

(C) Containers holding hazardous waste must be closed at all times during accumulation, except when it is necessary to add or remove waste.

(D) Containers holding hazardous waste must not be opened, handled, or accumulated in a manner that may rupture the container or cause it to leak.

(E) At least weekly, inspect central accumulation areas looking for leaking containers and for deterioration of containers caused by corrosion or other factors.

(F) All of the following special standards for incompatible wastes:
(I) Incompatible wastes, or incompatible wastes and materials, must not be placed in the same container unless the requirements of 40 CFR 265.17(b) are met.
(II) Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material unless the requirements of 40 CFR 265.17(b) are met.
(III) A container accumulating hazardous waste that is incompatible with any waste or other materials accumulated or stored nearby in other containers, piles, open tanks, or surface impoundments must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.
(G) Mark or label each container with all of the following:
(I) The words "Hazardous Waste."
(II) A description of the waste or the hazardous waste number, and an indication of the hazards of the contents. The indication of the hazards of the contents may include the applicable hazardous waste characteristic(s), the hazard communication consistent with 49 CFR part 172, subpart E or F, a hazard statement or pictogram consistent with 29 CFR 1910.1200, or a chemical hazard label consistent with the NFPA standard no. 704.
(III) The date upon which each period of accumulation begins clearly visible for inspection on each container.
(ii) In tanks and the small quantity generator complies with all of the following:
(A) Treatment or accumulation of hazardous waste in tanks must comply with 40 CFR 265.17(b).
(B) Hazardous wastes or treatment reagents must not be placed in a tank if they could cause the tank or its inner liner to rupture, leak, corrode, or otherwise fail before the end of its intended life.
(C) Uncovered tanks must be operated to ensure at least 60 centimeters of freeboard, unless the tank is equipped with a containment structure like a dike or trench, a drainage control system, or a diversion structure like a standby tank with a capacity that equals or exceeds the volume of the top 60 centimeters of the tank.
(D) If hazardous waste is continuously fed into a tank, the tank must be equipped with a means to stop this inflow.
(E) Except as noted in subparagraph (F) of this paragraph, a small quantity generator that accumulates hazardous waste in tanks must inspect, where present:
(I) Discharge control equipment at least once each operating day, to ensure that it is in good working order.
(II) Data gathered from monitoring equipment at least once each operating day to ensure that the tank is being operated according to its design.
(III) The level of waste in the tank at least once each operating day to ensure compliance with subparagraph (C) of this paragraph.
(IV) The construction materials of the tank at least weekly to detect corrosion or leaking of fixtures or seams.
(V) The construction materials of, and the area immediately surrounding, discharge confinement structures at least weekly to detect erosion or obvious signs of leakage. The small quantity generator shall remedy any deterioration or malfunction of equipment or structures that the inspection reveals on a schedule that ensures that the problem does not lead to an environmental or human health hazard. If a hazard is imminent or has already occurred, remedial action must be taken immediately.
(F) A small quantity generator accumulating hazardous waste in tanks or tank systems that have full secondary containment and that either use leak detection equipment to alert personnel to leaks, or implement established workplace practices to ensure leaks are promptly identified, shall inspect at least weekly, where applicable, the areas identified in subparagraph (E)(I) to (V) of this paragraph. Use of the alternate inspection schedule must be documented in the small quantity generator's

operating record. This documentation must include a description of the established workplace practices at the small quantity generator.

(G) Upon closure of the small quantity generator's site, that small quantity generator shall remove all hazardous waste from tanks, discharge control equipment, and discharge confinement structures. At closure, as throughout the operating period, unless the small quantity generator can demonstrate, in accordance with R 299.9203(3) or (5), that any waste removed from its tank is not a hazardous waste, it shall manage the waste in accordance with all applicable provisions of parts 3, 4, and 6 of these rules.

(H) Ignitable or reactive waste must not be placed in a tank, unless 1 or more of the following occurs:

(I) The waste is treated, rendered, or mixed before or immediately after placement in a tank so that the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under R 299.9212 and 40 CFR 265.17(b) is met.

(II) The waste is accumulated or treated in a way that it is protected from any material or conditions that may cause the waste to ignite or react.

(III) The tank is used solely for emergencies.

(I) A small quantity generator that treats or accumulates ignitable or reactive waste in covered tanks shall comply with the buffer zone requirements for tanks contained in Tables 2-1 to 2-6 of the NFPA standard no. 30.

(J) The following special conditions for incompatible wastes:

(I) Incompatible wastes, or incompatible wastes and materials, must not be placed in the same tank, unless the requirements of 40 CFR 265.17(b) are met.

(II) Hazardous waste must not be placed in an unwashed tank that previously held an incompatible waste or material, unless the requirements of 40 CFR 265.17(b) are met.

(K) Mark or label each tank with all of the following:

(I) The words "Hazardous Waste."

(II) A description of the waste or the hazardous waste number, and an indication of the hazards of the contents. The indication of the hazards of the contents may include the applicable hazardous waste characteristic(s), the hazard communication consistent with 49 CFR part 172, subpart E or F, a hazard statement or pictogram consistent with 29 CFR 1910.1200, or a chemical hazard label consistent with the NFPA standard no. 704.

(L) Use inventory logs, monitoring equipment, or other records to demonstrate that hazardous waste has been emptied within 180 days of first entering the tank if using a batch process, or in the case of a tank with a continuous flow process, demonstrate that estimated volumes of hazardous waste entering the tank daily exit the tank within 180 days of first entering. The inventory logs or records must be kept onsite and readily available for inspection.

(iii) Place the hazardous waste on a drip pad and comply with all of the following:

(A) 40 CFR part 265, subpart W, except 265.445(c).

(B) The small quantity generator must remove all wastes from the drip pad at least once every 90 days. Any hazardous wastes that are removed from the drip pad at least once every 90 days are then subject to the 180-day accumulation limit in subdivision (b) of this subrule and R 299.9305 if hazardous wastes are being managed in satellite accumulation areas before being moved to the central accumulation area.

(C) The small quantity generator must maintain on site the following records readily available for inspection:

(I) A written description of procedures that will be followed to ensure that all wastes are removed from the drip pad and associated collection system at least once every 90 days.

(II) 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.

(e) The applicable requirements of 40 CFR part 268.

(f) The small quantity generator shall maintain and operate the small quantity generator site in a manner that minimizes 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 that could threaten human health or the environment.

(g) All areas where hazardous waste is either generated or accumulated must be equipped with all the items specified in this subdivision, unless none of the hazards posed by waste handled at the small quantity generator's site could require a particular kind of specified equipment or the actual waste generation or accumulation area does not lend itself for safety reasons to have a particular kind of specified equipment. A small quantity generator shall determine the most appropriate locations to locate specified equipment necessary to prepare for and respond to emergencies:

(i) An internal communications or alarm system capable of providing immediate emergency instruction, voice or signal, to small quantity generator site personnel.

(ii) 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.

(iii) 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.

(iv) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.

(h) All communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.

(i) When hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation shall have immediate, unimpeded access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless the device is not required under subdivision (g) of this subrule.

(j) If there is just 1 employee on the premises while the small quantity generator's site is operating, the employee shall have immediate unimpeded 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 a device is not required under subdivision (g) of this subrule.

(k) The small quantity generator shall maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of small quantity generator's site operation in an emergency, unless aisle space is not needed for any of these purposes.

(l) The small quantity generator shall attempt to make arrangements with the local police department, fire department, other emergency response teams, emergency response contractors, equipment suppliers and local hospitals, taking into account the types and quantities of hazardous wastes handled at the small quantity generator's site. Arrangements may be made with the local emergency planning committee, if it is determined to be the appropriate organization with which to make arrangements. As part of this coordination, the small quantity generator shall attempt to familiarize these organizations with the layout of the small quantity generator's site, the properties of hazardous waste handled at the small quantity generator's site and associated hazards, places where personnel would normally be working, entrances to roads inside the small quantity generator's site, and possible evacuation routes as well as the types of injuries or illnesses that could result from fires, explosions, or releases at the small quantity generator's site. If more than 1 police or fire department

might respond to an emergency, the small quantity generator shall attempt to make arrangements designating primary emergency authority to a specific fire or police department, and arrangements with any others to provide support to the primary emergency authority. The small quantity generator shall maintain records documenting the arrangements with the local fire department as well as any other organization necessary to respond to an emergency. This documentation must include documentation in the operating record that either confirms the arrangements actively exist or, if no arrangements exist, confirms that attempts to make the arrangements were made. A small quantity generator possessing 24-hour response capabilities may seek a waiver from the authority having jurisdiction over the fire code within the small quantity generator's state or locality as far as needing to make arrangements with the local fire department as well as any other organization necessary to respond to an emergency, if the waiver is documented in the operating record.

(m) The small quantity generator shall ensure that, at all times, there is at least 1 employee either on the premises or on call with the responsibility for coordinating all emergency response measures specified in subdivision (p) of this subrule. This employee is the emergency coordinator and, if on call, shall be available to respond to an emergency by reaching the small quantity generator's site within a short period of time.

(n) The small quantity generator shall post next to telephones or in areas directly involved in the generation and accumulation of hazardous waste the name and emergency telephone number of the emergency coordinator; the location of fire extinguishers and spill control material, and, if present, fire alarm; and the telephone number of the fire department, unless the small quantity generator's site has a direct alarm.

(o) The small quantity generator shall ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures relevant to their responsibilities during normal site operations and emergencies.

(p) The emergency coordinator or his or her designee shall respond to any emergencies that arise. The applicable responses are as follows:

(i) In the event of a fire, call the fire department or attempt to extinguish it using a fire extinguisher.

(ii) 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. The containment and cleanup may be conducted either by the small quantity generator or by a contractor on behalf of the small quantity generator.

(iii) In the event of a fire, explosion, or other release of hazardous waste or hazardous waste constituents that could threaten human health or the environment or if the small quantity generator has knowledge that a spill has reached surface water or groundwater, the small quantity generator shall also immediately notify the department's pollution emergency alerting system – telephone number 800-292-4706. For releases that could threaten human health outside the small quantity generator's site or if the small quantity generator has knowledge that a spill has reached surface water, the small quantity generator shall immediately notify the national response center at its 24-hour toll free number - 800-424-8802. The notifications must include all of the following information:

(A) The name and telephone number of the person who is reporting the incident.

(B) The name, address, telephone number, and site identification number of the small quantity generator.

(C) The date, time, and type of incident.

(D) The name and quantity of the material or materials involved and released.

(E) The extent of injuries, if any.

(F) The estimated quantity and disposition of recovered materials that resulted from the incident, if any.

(G) An assessment of actual or potential hazards to human health or the environment.
(H) The immediate response action taken.
(q) The small quantity generator ensures that the area where the waste is accumulated is protected from weather, fire, physical damage, and vandals.
(r) The small quantity generator ensures that hazardous waste accumulation is conducted so hazardous waste or hazardous waste constituents cannot escape by gravity into the soil, directly or indirectly, into surface or groundwaters, or into drains or sewers and so that fugitive emissions are not in violation of part 55 of the act, MCL 324.5501 to 324.5542.
(2) A small quantity generator who shall transport its waste, or offer its 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 an operating license or without being an existing facility under to R 299.9502, if he or she complies with subrule (1)(b) to (r) of this rule.
(3) A small quantity generator who accumulates hazardous waste for more than 180 days, or 270 days as allowed for in subrule (2) of this rule, is an operator of a storage facility and is subject to the requirements of parts 5 to 7 of these rules unless the small quantity generator has been granted an extension to the 180-day or, if applicable 270-day, period. The director or his or her designee may grant an extension if hazardous wastes shall remain on site for longer than 180 days or 270 days, if applicable, due to unforeseen, temporary, and uncontrollable circumstances. The director or his or her designee may grant an extension of up to 30 days on a case-by-case basis.
(4) A small quantity 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 R 299.9608 may accumulate the returned waste on site in accordance with subrule (1) to (3). Upon receipt of the returned shipment, the small quantity generator must:
(a) Sign Item 18c of the manifest, if the transporter returned the shipment using the original manifest.
(b) Sign Item 20 of the manifest, if the transporter returned the shipment using a new manifest.
(5) A small quantity generator experiencing an episodic event may accumulate hazardous waste in accordance with R 299.9316 instead of R 299.9307.

R 299.9307 Conditions for exemption for large quantity generators that accumulate hazardous waste.

Rule 307. (1) A large quantity generator may accumulate hazardous waste on site without an operating license issued under part 111 of the act, MCL 324.11101 to 324.11153, and without complying with the requirements of parts 5 to 8 of these rules or the notification requirements of section 3010 of RCRA, 42 USC 6930, if all of the following conditions for exemption are met:
(a) The large quantity generator accumulates hazardous waste on site for no more than 90 days, unless the large quantity generator is in compliance with the accumulation time extension or F006 accumulation conditions for exemption in subrules (2) to (5) of this rule.
(b) The hazardous waste is managed under either of the following methods:
(i) In containers and the large quantity generator complies with all of the following:
(A) The containment requirements of 40 CFR 264.175 and the applicable requirements of 40 CFR part 265, subparts AA, BB, and CC.
(B) If a container holding hazardous waste is not in good condition, or if it begins to leak, the large quantity generator shall immediately transfer the hazardous waste from this container to a container that is in good condition and does not leak, or immediately manage the waste in some other way that complies with the conditions for exemption of this rule.
(C) Use a container made of or lined with materials that will not react with, and are otherwise

compatible with, the hazardous waste to be accumulated, so that the ability of the container to contain the waste is not impaired.

(D) Containers holding hazardous waste must be closed at all times during accumulation, except when it is necessary to add or remove waste.

(E) Containers holding hazardous waste must not be opened, handled, or accumulated in a manner that may rupture the container or cause it to leak.

(F) At least weekly, inspect central accumulation areas looking for leaking containers and for deterioration of containers caused by corrosion or other factors.

(G) Both of the following special conditions for ignitable or reactive wastes:

(I) Containers holding ignitable or reactive waste must be located at least 15 meters (50 feet) from the large quantity generator's property line unless a written approval is obtained from the authority having jurisdiction over the local fire code allowing hazardous waste accumulation to occur within this restricted area. A record of the written approval must be maintained on site as long as ignitable or reactive hazardous waste is accumulated in this area.

(II) The large quantity generator shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including but not limited to the following: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks, spontaneous ignition, and radiant heat. While ignitable or reactive waste is being handled, the large quantity generator shall confine smoking and open flame to specially designated locations. "No smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.

(H) All of the following special standards for incompatible wastes:

(I) Incompatible wastes, or incompatible wastes and materials, must not be placed in the same container unless the requirements of 40 CFR 265.17(b) are met.

(II) Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material unless the requirements of 40 CFR 265.17(b) are met.

(III) A container holding hazardous waste that is incompatible with any waste or other materials accumulated or stored nearby in other containers, piles, open tanks, or surface impoundments must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

(I) Mark or label each container with all of the following:

(I) The words "Hazardous Waste."

(II) A description of the waste or the hazardous waste number, and an indication of the hazards of the contents. The indication of the hazards of the contents may include the applicable hazardous waste characteristic(s), the hazard communication consistent with 49 CFR part 172, subpart E or F, a hazard statement or pictogram consistent with 29 CFR 1910.1200, or a chemical hazard label consistent with the NFPA standard no. 704.

(III) The date upon which each period of accumulation begins clearly visible for inspection on each container.

(ii) In tanks and the generator complies with the applicable requirements of 40 CFR part 265, subparts J, AA, BB, and CC, except 265.197(c) and 265.200, and R 299.9615, except for R 299.9615(1). For the purposes of this rule, the references in R 299.9615 to 40 CFR part 264 are replaced by references to 40 CFR part 265.

(A) Mark or label each tank with all of the following:

(I) The words "Hazardous Waste."

(II) A description of the waste or the hazardous waste number, and an indication of the hazards of the contents. The indication of the hazards of the contents may include the applicable hazardous waste characteristic(s), the hazard communication consistent with 49 CFR part 172, subpart E or F, a

hazard statement or pictogram consistent with 29 CFR 1910.1200, or a chemical hazard label consistent with the NFPA standard no. 704.

(B) Use inventory logs, monitoring equipment, or other records to demonstrate that hazardous waste has been emptied within 90 days of first entering the tank if using a batch process, or in the case of a tank with a continuous flow process, demonstrate that estimated volumes of hazardous waste entering the tank daily exit the tank within 90 days of first entering. The inventory logs or records must be kept onsite and readily available for inspection.

(iii) On drip pads and the large quantity generator shall complies with all of the following:

(A) 40 CFR part 265, subpart W.

(B) The large quantity generator shall remove all wastes from the drip pad at least once every 90 days. Any hazardous wastes that are removed from the drip pad at least once every 90 days are then subject to the 90-day accumulation limit in subdivision (a) of this subrule and R 299.9305 if hazardous wastes are being managed in satellite accumulation areas before being moved to the central accumulation area.

(C) The large quantity generator shall maintain on site the following records readily available for inspection:

(I) A written description of procedures that will be followed to ensure that all wastes are removed from the drip pad and associated collection system at least once every 90 days.

(II) 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.

(c) The large quantity generator complies with the requirements of 40 CFR part 262, subpart M. In the event of a fire, explosion, or other release of hazardous waste or hazardous waste constituents that could threaten human health or the environment or if the large quantity generator has knowledge that a spill has reached surface water or groundwater, the large quantity generator shall also immediately notify the department's pollution emergency alerting system - telephone number 800-292-4706. The notifications must include all of the following information:

(i) The name and telephone number of the person who is reporting the incident.

(ii) The name, address, telephone number, and site identification number of the large quantity generator.

(iii) The date, time, and type of incident.

(iv) The name and quantity of the material or materials involved and released.

(v) The extent of injuries, if any.

(vi) The estimated quantity and disposition of recovered materials that resulted from the incident, if any.

(vii) An assessment of actual or potential hazards to human health or the environment.

(viii) The immediate response action taken.

(d) The large quantity generator shall ensure that the area where the waste is accumulated is protected from weather, fire, physical damage, and vandals.

(e) The large quantity generator shall ensure that hazardous waste accumulation is conducted so hazardous waste or hazardous waste constituents cannot escape by gravity into the soil, directly or indirectly, into surface or groundwaters, or into drains or sewers and so that fugitive emissions are not in violation of part 55 of the act, MCL 324.5501 to 324.5542.

(f) Personnel shall successfully complete a program of classroom instruction, online training, or on-the-job training that teaches them to perform their duties in a way that ensures compliance with these rules. The large quantity generator shall ensure that this program includes all of the elements described in the document required under subdivision (i) of this subrule. This program must be directed by a person trained in hazardous waste management procedures and include instruction which teaches personnel hazardous waste management procedures, including contingency plan

implementation, relevant to the positions in which they are employed. At a minimum, the training program must be designed to ensure that 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 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 groundwater contamination incidents.

(vi) Shutdown of operations.

(g) For employees that receive emergency response training under 29 CFR 1910.120(p)(8) and 1910.120(q), the large quantity generator is not required to provide separate emergency response training under this rule if that the overall training meets all of the conditions of exemption in this rule.

(h) Personnel shall successfully complete the program required in subdivision (f) of this subrule within 6 months after the date of their employment or assignment to the large quantity generator's site, or to a new position at the site, whichever is later. Employees shall not work in unsupervised positions until they have completed the training standards of subdivision (f) of this subrule. Personnel shall also take part in an annual review of the initial training required in subrule (f) of this subrule.

(i) The large quantity generator must maintain all of the following documents and records on site:

(i) The job title for each position at the site related to hazardous waste management, and the name of the employee filling each job.

(ii) A written job description for each position listed under paragraph (i) of this subdivision. 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 must include the requisite skill, education, or other qualifications, and duties of personnel assigned to each position.

(iii) 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 paragraph (i) of this subdivision.

(iv) Records that document that the training or job experience, required under subdivisions (f) to (h) of this subrule, has been given to, and completed by, personnel.

(j) Training records on current personnel must be kept until closure of the large quantity generator's site. Training records on former employees must be kept for at least 3 years from the date the employee last worked at the large quantity generator's site. Personnel training records may accompany personnel transferred within the same company.

(k) A large quantity generator accumulating hazardous wastes in containers, tanks, or drip pads must, before closing an individual waste accumulation unit or all of the units, meet the following conditions:

(i) If closing an individual unit, perform 1 of the following:

(A) Place a notice in the operating record within 30 days after closure identifying the location of the unit.

(B) Meet the closure performance standards of paragraph (iii) of this subdivision for containers or tanks or paragraph (iv) of this subdivision for drip pads, and notify the director following the procedures in paragraph (ii)(B) of this subdivision. If the unit is subsequently reopened, the large quantity generator may remove the notice from the operating record.

(ii) If closing all of the units, comply with all of the following:

(A) Notify the director using Michigan site identification form EQP5150 no later than 30 days before closing the large quantity generator's site.

(B) Notify the director using the Michigan site identification form EQP5150 within 90 days after

closing all of the units that it has met the closure performance standards of subdivisions (iii) or (iv) of this subrule. If the large quantity generator cannot meet these closure performance standards, notify the director using Michigan site identification form EQP5150 that it will close as a landfill under 40 CFR 265.310 in the case of a container or tank unit or 40 CFR 265.445(b) in the case of drip pads.

(C) If additional time is needed to clean close all of the units, notify the director using Michigan site identification form EQP5150 within 75 days after the date provided in subparagraph (A) of this paragraph to request an extension and provide an explanation as to why the additional time is required.

(iii) At closure, close each unit in a manner that does all of the following:

(A) Minimizes the need for further maintenance by controlling, minimizing, or eliminating, to the extent necessary to protect human health and the environment, the postclosure 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.

(B) Removes or decontaminates all contaminated equipment, structures, and soil and any remaining hazardous waste residues from the unit including containment system components, contaminated soils and subsoils, bases, and structures and equipment contaminated with waste, unless R 299.9203(5) applies.

(C) Any hazardous waste generated in the process of closing the unit must be managed in accordance with all applicable standards of parts 3 to 7, including removing any hazardous waste contained in the unit within 90 days of generating it and managing these wastes in a facility licensed under part 111 of the act, MCL 324.11101 to 324.11153, or under an interim status or permitted facility under subtitle C of RCRA, 42 USC 6921 to 6939g, or a state program authorized thereunder.

(D) If the large quantity generator demonstrates that any contaminated soils and wastes cannot be practicably removed or decontaminated as required in subparagraph (B) of this paragraph, then the unit is considered a landfill. For the purposes of closure, postclosure, and financial responsibility, the large quantity generator shall close the unit and perform postclosure care in accordance with 40 CFR 265.310 and comply with the requirements for landfills specified in 40 CFR part 265, subparts G and H.

(iv) At closure, the large quantity generator shall comply with the closure requirements of paragraphs (ii) and (iii)(A) and (C) of this subdivision and 40 CFR 265.445(a) and (b).

(v) The closure requirements of this subdivision do not apply to satellite accumulation areas.

(l) The applicable provisions of 40 CFR part 268.

(2) A large quantity generator who accumulates hazardous waste for more than 90 days is an operator of a storage facility and is subject to the requirements of parts 5 to 8 of these rules and the notification requirements of section 3010 of RCRA, 42 USC 6930, unless it has been granted an extension to the 90-day period. The director or his or her designee may grant an extension if hazardous wastes must remain on site for longer than 90 days, if applicable, due to unforeseen, temporary, and uncontrollable circumstances. The director or his or her designee may grant an extension of up to 30 days on a case-by-case basis.

(3) A large quantity generator who also generates wastewater treatment sludges from electroplating operations that meet the listing description for the hazardous waste number F006, may accumulate F006 waste on site for more than 90 days, but not more than 180 days without being subject to parts 5 to 8 of these rules and the notification requirements of section 3010 of RCRA, 42 USC 6930, if the large quantity generator complies with all of the following additional conditions for exemption:

(a) The large quantity generator has implemented pollution prevention practices that reduce the amount of any hazardous substances, pollutants, or contaminants entering F006 waste or otherwise released to the environment before its recycling.

(b) The F006 waste is legitimately recycled through metals recovery.

(c) No more than 20,000 kilograms of F006 waste is accumulated on site at any 1 time.
(d) The F006 waste is managed in accordance with the following:
(i) The F006 waste is placed in either of the following:
(A) In containers and the large quantity generator complies with the applicable conditions for exemption in R 299.9307(1)(b)(i).
(B) Is placed in tanks and the large quantity generator complies with the applicable conditions for exemption in R 299.9307(1)(b)(ii).
(ii) The date upon which each period of accumulation begins is clearly marked and visible for inspection on each container.
(iii) While being accumulated on site, each container and tank is labeled or marked clearly with both of the following:
(A) The words "Hazardous Waste."
(B) A description of the waste or the hazardous waste number, and an indication of the hazards of the contents. The indication of the hazards of the contents may include the applicable hazardous waste characteristic(s), the hazard communication consistent with 49 CFR part 172, subpart E or F, a hazard statement or pictogram consistent with 29 CFR 1910.1200, or a chemical hazard label consistent with the NFPA standard no. 704.
(iv) The large quantity generator complies with the requirements in subdivisions (c) to (k) of subrule (1) of this rule.
(4) A large quantity generator who also generates wastewater treatment sludges from electroplating operations that meet the listing description for hazardous waste number F006, and who must 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 being subject to parts 5 to 8 of these rules and the notification requirements of section 3010 of RCRA, 42 USC 6930, if the large quantity generator complies with all of the conditions for exemption of subrule (3) of this rule.
(5) A large quantity generator accumulating F006 waste in accordance with subrules (3) and (4) of this rule who accumulates F006 waste on site for more than 180 days, or for more than 270 days if the large quantity generator must 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 parts 5 to 7 of these rules and the notification requirements of section 3010 of RCRA, 42 USC 6930, unless the large quantity 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. Extensions and exceptions may be granted by the director if F006 waste must remain on site for longer than 180 days, or 270 days if applicable, or if more than 20,000 kilograms of F006 waste must 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.
(6) A large quantity generator may accumulate on site hazardous waste received from very small quantity generators under control of the same person, without an operating license or complying with the requirements of parts 5 to 8 of these rules and the notification requirements of section 3010 of RCRA, 42 USC 6930, if the large quantity generator complies with all of the following conditions. As used in this rule, "control" means the power to direct the policies of the generator, whether by the ownership of stock, voting rights, or otherwise, except that contractors who operate generator facilities on behalf of a different person are not considered to "control" the generators.
(a) The large quantity generator notifies the department at least 30 days before receiving the first shipment from a very small quantity generator using Michigan site identification form EQP5150. The large quantity generator shall identify on the form the name, site address, and contact person

name and business telephone number for each very small quantity generator. The large quantity generator shall also submit an updated Michigan site identification form EQP5150 within 30 days after a change in the name or site address for the very small quantity generator.

(b) The large quantity generator maintains records of shipments for 3 years from the date the hazardous waste was received from the very small quantity generator. These records must identify the name, site address, and contact information for the very small quantity generator and include a description of the hazardous waste received, including the quantity and the date the waste was received.

(c) The large quantity generator complies with the independent requirements identified in R 299.9301(1)(c) and the conditions for exemption in this rule for all hazardous waste received from a very small quantity generator. For purposes of the labeling and marking regulations in subrule (1)(b) of this rule, the large quantity generator shall label the container or unit with the date accumulation started, the date the hazardous waste was received from the very small quantity generator. If the large quantity generator is consolidating incoming hazardous waste from a very small quantity generator with either its own hazardous waste or with hazardous waste from other very small quantity generators, the large quantity generator shall label each container or unit with the earliest date any hazardous waste in the container was accumulated on site.

(7) A large quantity 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 R 299.9608, may accumulate the returned waste on site in accordance with subrules (1) and (2) of this rule. Upon receipt of the returned shipment, the large quantity generator must:

(a) Sign Item 18c of the manifest, if the transporter returned the shipment using the original manifest.

(b) Sign Item 20 of the manifest, if the transporter returned the shipment using a new manifest.

R 299.9308 Site identification numbers for small and large quantity generators.

Rule 308. (1) A small quantity or large quantity generator shall not treat or store, dispose of, or transport or offer for transportation, hazardous waste without having received a site identification number from the regional administrator or the regional administrator's designee.

(2) A small quantity or large quantity generator who has not received a site identification number may obtain one by applying to the regional administrator or the regional administrator's designee. Upon receiving the request, the administrator shall assign a site identification number to the generator.

(3) A small quantity or large quantity generator shall not offer his or her hazardous waste to transporters or to treatment, storage, or disposal facilities that have not received a site identification number.

(4) Applications for site identification numbers must be made on Michigan site identification form EQP5150 and signed under 40 CFR 270.11(a)(1) to (3).

(5) A small quantity generator shall re-notify the regional administrator or the regional administrator’s designee starting in 2021 and every 4 years thereafter. This re-notification must be submitted by September 1 of each year in which the re-notifications are required.

(6) A large quantity generator shall re-notify the regional administrator or the regional administrator’s designee by March 1 of each even-numbered year thereafter. A large quantity generator may submit this re-notification as part of its biennial report required under R 299.9312.

(7) A recognized trader shall not arrange for import or export of hazardous waste without having received a site identification number from the regional administrator or the regional administrator’s designee.

R 299.9309 Manifest requirements applicable to small and large quantity generators.

Rule 309. (1) A small quantity or large quantity generator who transports, or offers for transport, a hazardous waste for off-site treatment, storage, or disposal, or a treatment, storage, or disposal facility who offers for transport a rejected hazardous waste load, shall do all of the following:

(a) Prepare a manifest (OMB Control number 2050-0039) on EPA Form 8700-22, and if necessary, EPA Form 8700-22A.

(b) Use a manifest in accordance with 40 CFR 262.20 to 262.23, and 262.27, and the instructions in the appendix to 40 CFR part 262 before transporting the waste offsite.

(c) Instead of using a paper manifest as specified in subdivisions (a) and (b) of this subrule, prepare and use an electronic manifest in accordance with 40 CFR 3.10 and 262.24.

(d) Use a transporter or be a transporter, if a generator transports his or her own hazardous waste, who is registered and permitted under act 138 under part 4 of these rules.

(2) The electronic signature methods for the e-manifest system must be methods that are designed and implemented in a manner that the EPA considers to be as cost-effective and practical as possible for the user of the manifest. An electronic signature must be a legally valid and enforceable signature under applicable EPA and other federal requirements pertaining to electronic signatures.

(3) The requirements of this rule do not apply to hazardous waste that is produced by a small quantity generator if both of the following requirements are met:

(a) The waste is reclaimed under a contractual agreement that specifies the type of waste and frequency of shipments and the vehicle used to transport the waste to the recycling facility and to deliver the regenerated material back to the generator is owned and operated by the reclaimer of the waste.

(b) The generator maintains a copy of the reclamation agreement in his or her files for a period of not less than 3 years after termination or expiration of the agreement.

(4) A small quantity or large quantity generator who authorizes a transporter to commingle his or her hazardous waste under R 299.9405(2) or (3) shall place in the special handling instructions and additional information section of the manifest the hazardous waste number followed by the letters "CS," as specified in R 299.9405(2), or the letters "CD," as specified in R 299.9405(3), and the associated manifest line item.

(5) The requirements of this rule and R 299.9310(1)(d) do not apply to the transport of hazardous waste shipments 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 the property is contiguous property divided by a public or private right-of-way. Notwithstanding R 299.9401, the generator or transporter shall comply with the requirements for transporters in R 299.9410 in the event of a discharge of hazardous waste on a public or private right-of-way.

(6) 40 CFR 3.10, 262.20, 262.21, 262.22, 262.23, 262.24, and 262.27 and the appendix to part 262 are adopted by reference in R 299.11003. For the purposes of adoption, the term "site identification number" replaces the term "EPA identification number," the term "R 299.9207" replaces the term "§261.7," and the term "§264.72" replaces the term "§265.72."

R 299.9310 Pre-transport requirements applicable to small and large quantity generators.

Rule 310. (1) Before transporting hazardous waste or offering hazardous waste for transportation off site, a small quantity or large quantity generator shall do all of the following:

(a) Package the waste in accordance with the applicable DOT regulations on packaging under 49 CFR parts 173, 178, and 179.

(b) Label each package in accordance with the applicable DOT regulations on hazardous materials under 49 CFR part 172.

(c) Mark each package of hazardous waste in accordance with the applicable DOT regulations under 49 CFR part 172.

(d) Mark each container of 119 gallons or less used in the transportation with the following words and information displayed in accordance with 49 CFR 172.304:

(i) HAZARDOUS WASTE - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.

(ii) Generator's Name and Address _____

(iii) Generator's Site Identification Number _____

(iv) Manifest Tracking Number _____

(v) The hazardous waste number identifying the waste.

(e) A generator may use a nationally recognized electronic system, such as bar coding, to identify the hazardous waste number, as required by subdivision (d)(v) or subdivision (f) of this subrule.

(f) Lab packs that will be incinerated in compliance with 40 CFR 268.42(c) are not required to be marked with hazardous waste numbers, except D004, D005, D006, D007, D008, D010, and D011, if applicable.

(g) Placard or offer the initial transporter the appropriate placards according to DOT regulations for hazardous materials under 49 CFR part 172, subpart F.

(2) 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. Before disposal in a hazardous waste landfill, liquids must meet additional requirements as specified in 40 CFR 264.314 and 265.314.

(3) 49 CFR parts 172, 173, 178, and 179 are adopted by reference in R 299.11004.

R 299.9311 Recordkeeping for small and large quantity generators.

Rule 311. (1) Small and large quantity generators shall keep records supporting the hazardous waste determinations made under R 299.9302 for not less than 3 years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal. The records must include all of the following information:

(a) The type of waste and the source or process from which it was produced.

(b) The chemical composition and properties of the waste and the anticipated fluctuations in its chemical composition and properties.

(c) The results of any tests, sampling, waste analyses, or other determinations made under R 299.9302.

(d) Records documenting the validity and relevance of the tests, sampling, and analytical methods used, including all of the following information:

(i) The sampling procedure and the reasons for determining that the sample is representative of the waste.

(ii) The accuracy and precision of any tests conducted.

(e) The knowledge basis for the generator’s determination if testing, sampling, and waste analyses were not conducted.

(2) A small or large generator who is requested by the director to submit any of the information in subrule (1) of this rule shall provide the required information within 30 days after receipt of the request.

(3) Small and large quantity generators shall keep a copy of each manifest signed under R 299.9309 for 3 years or until he or she receives a signed copy from the designated facility that received the waste. This signed copy must be retained as a record for not less than 3 years from the date the waste was accepted by the initial transporter.

(4) A large quantity generator shall keep a copy of the data submitted under R 299.9312(1),

exception report, or other report required by the director, or his or her designee, for a period of not less than 3 years from the due date of the report.

(5) Small and large quantity generators shall keep the documentation required under R 299.9503(1)(i)(ix) for not less than 3 years from the date that the waste was treated.

(6) Small and large quantity generators shall keep the documentation required under R 299.9213(5) for not less than 3 years.

(7) Small and large quantity generators shall keep documentation of all inspections, training, and other records required under R 299.9306 and R 299.9307, respectively, for not less than 3 years.

(8) The periods of retention referred to in this rule are extended automatically during any unresolved enforcement action regarding the regulated activity or as requested by the director.

R 299.9312 Reporting for large and small quantity generators.

Rule 312. (1) A generator who is a large quantity generator for at least 1 month of an odd-numbered year, the reporting year, who ships any hazardous waste off-site to a treatment, storage, or disposal facility within the United States shall complete and submit EPA Form 8700-13 A/B to the director or the director's designee by March 1 of the following even-numbered year and cover generator activities during the previous year.

(2) Any generator who is a large quantity generator for at least 1 month of an odd-numbered year, the reporting year, who treats, stores, or disposes of hazardous waste on-site shall complete and submit EPA Form 8700-13 A/B to the director or the director's designee by March 1 of the following even-numbered year covering those wastes in accordance with parts 5 and 6 of these rules. This requirement also applies to large quantity generators that receive hazardous waste from very small quantity generators under R 299.9307(6).

(3) Exports of hazardous waste to foreign countries are not required on EPA Form-8700-13-A/B. A separate annual report requirement is set forth in 40 CFR 262.83(g) for hazardous waste exporters.

(4) Any large quantity generator 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 do both of the following:

(a) Contact the transporter or the owner or operator of the designated facility to determine the status of the hazardous waste.

(b) If the generator has not obtained confirmation that 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, then the generator shall submit an exception report to the director, or his or her designee, and the EPA regional administrator for the region in which the generator is located. The exception report must include both of the following:

(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 the generator's authorized representative, explaining the efforts taken to locate the hazardous waste and the results of those efforts.

(5) Any small quantity generator 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 or his or her designee and the regional administrator for the region in which the generator is located.

(6) For rejected shipments of hazardous waste, the time frames referenced in subrules (4) and (5) of this rule begin the date the waste was accepted by the initial transporter forwarding the hazardous waste shipment from the designated facility to the alternate facility.

(7) A generator shall furnish periodic reports of hazardous waste generated, stored, transferred, treated, disposed of, or transported for treatment, storage, or disposal required by the director or the

director's designee.

R 299.9313 Land disposal restrictions.

Rule 313. (1) Generators of hazardous waste shall comply with the applicable requirements and restrictions of 40 CFR part 268.

(2) 40 CFR part 268 is adopted by reference in R 299.11003. For the purposes of adoption, the term "director" replaces the terms "administrator" and "assistant administrator," the term "R 299.9305, R 299.9306, and R 299.9307" replaces the term "§§262.15, 262.16, and 262.17," the term "part 6 of these rules" replaces the term "parts 264 and 265 of this chapter," and the term "part 2 of these rules" replaces the term "subparts C and D of part 261 of this chapter," except in 40 CFR 268.5, 268.6, 268.40(b), 268.42(b), and 268.44(a) to (g) and (i) to (o).

R 299.9314 Transfrontier movements of hazardous waste for recovery and disposal.

Rule 314. (1) Persons who import or export wastes that are considered hazardous under the U.S. national procedures and that are destined for recovery operations shall comply with 40 CFR part 262, subpart H, except 262.80. A waste is considered hazardous under the U.S. national procedures if it meets the federal definition of hazardous waste in 40 CFR 261.3 and it is subject to either the manifesting requirements of part 3 of these rules, the universal waste provisions of R 299.9228, or the export requirements in the spent lead-acid battery management standards of R 299.9804.

(2) Any person subject to this rule, including a notifier, consignee, or recovery facility operator, who mixes 2 or more hazardous or solid wastes or otherwise subjects 2 or more hazardous or solid wastes to physical or chemical transformation operations, and thereby creates a new hazardous waste, shall comply with the following requirements:

(a) The person shall be considered the generator of the waste and comply with the requirements of part 3 of these rules.

(b) The applicable notifier requirements of 40 CFR part 262, subpart H.

(3) 40 CFR part 262, subpart H, except 262.80, is adopted by reference in R 299.11003.

R 299.9315 Academic laboratories; alternate generator requirements.

Rule 315. (1) This rule provides alternate requirements for hazardous waste determinations and accumulation of hazardous waste in laboratories owned by eligible academic entities.

(2) Persons with laboratories owned by eligible academic entities may elect to comply with the requirements of 40 CFR part 262, subpart K, except 262.201 and 262.202, instead of the requirements of R 299.9304 to R 299.9307, as applicable.

(3) 40 CFR part 262, subpart K, except 262.201 and 262.202 and the references to performance track members, is adopted by reference in R 299.11003. For the purposes of adoption, the term "director" replaces the term "EPA regional administrator," the term "site identification number" replaces "EPA identification number," the term "operating license" replaces the term "RCRA Part B permit," the term "hazardous waste numbers" replaces the term "hazardous waste codes," the term "Michigan site identification form EQP5150" replaces the term "RCRA Subtitle C Site Identification Form (EPA Form 8700-12)," the term "R 299.9101(bb)" replaces the term "§260.11," the term "R 299.9212" replaces the term "40 CFR part 261, subpart C," the term "R299.9213 and R 299.9214" replaces the term "40 CFR part 261, subpart D," the term "R 299.9202" replaces the term "§261.2," the term "R 299.9203" replaces the term "§261.3," the term "R 299.9304" replaces the term "§261.5," the term "R 299.9214" replaces the term "§261.33(e)," the term "part 3 of the rules" replaces the term "40 CFR part 262," the term "R 299.9302" replaces the term "§262.11," the term "R 299.9302(1)(a)" replaces the term "§262.11(a)," the term "R 299.9303" replaces the term

"§262.13," the term "R 299.9304" replaces the term "§262.14," the term "R 299.9305" replaces the term "§262.15," the term "R 299.9306" replaces the term "§262.16," the term "R 299.9306(1)(d)(i)(G) and (ii)(K)" replaces the term "§262.16(b)(6)," the term "R 299.9307" replaces the term "§262.17," and the term "R 299.9307(1)(b)(i)(I)and (ii)(A)" replaces the term "§262.17(a)(5)."

R 299.9316 Episodic generation; alternate requirements for very small and small quantity generators.

Rule 316. (1) This rule provides alternative requirements for very small and small quantity generators and the episodic generation of wastes beyond their usual generator categories.

(2) A very small quantity generator may maintain its existing generator category for hazardous waste generated during an episodic event if the very small quantity generator complies with all of the following conditions:

(a) The very small quantity generator is limited to 1 episodic event per calendar year, unless a petition is granted under subrules (4) to (7) of this rule.

(b) The very small quantity generator shall notify the director no later than 30 calendar days before initiating a planned episodic event using Michigan site identification form EQP5150. In the event of an unplanned episodic event, the very small quantity generator shall notify the director within 72 hours of the unplanned event via phone, email, or fax and subsequently submit Michigan site identification form EQP5150. The very small quantity generator shall include the start date and end date of the episodic event, the reason(s) for the event, types and estimated quantities of hazardous waste expected to be generated as a result of the episodic event, and shall identify a facility contact and emergency coordinator with 24-hour telephone access to discuss the notification submittal or respond to an emergency in compliance with R 299.9306(1)(n).

(c) The very small quantity generator shall have a site identification number or obtain a site identification number using Michigan site identification form EQP5150.

(d) A very small quantity generator is prohibited from accumulating hazardous waste generated from an episodic event on drip pads and in containment buildings.

(e) The episodic hazardous waste is managed under 1 or more of the following methods:

(i) In containers and the very small quantity generator complies with all off the following:

(A) The standards of R 299.9306(1)(d)(i).

(B) Each container is marked or labeled with all of the following:

(I) The words "Episodic Hazardous Waste."

(II) A description of the waste and an indication of the hazards of the contents. The indication of the hazards of the contents may include the applicable hazardous waste characteristic(s), the hazard communication consistent with 49 CFR part 172, subpart E or F, a hazard statement or pictogram consistent with 29 CFR 1910.1200, or a chemical hazard label consistent with the NFPA standard no. 704.

(III) The date upon which the episodic event began.

(ii) In tanks and the very small quantity generator complies with all of the following:

(A) The standards of R 299.9306(1)(d)(ii).

(B) Each tank is marked or labeled with both of the following:

(I) The words "Episodic Hazardous Waste."

(II) A description of the waste and an indication of the hazards of the contents. The indication of the hazards of the contents may include the applicable hazardous waste characteristic(s), hazard communication consistent with 49 CFR part 172, subpart E or F, a hazard statement or pictogram consistent with 29 CFR 1910.1200, or a chemical hazard label consistent with the NFPA standard no. 704.

(C) Use inventory logs, monitoring equipment, or other records to identify the date upon which each episodic event begins.

(D) Keep inventory logs or records with the above information on site and readily available for inspection.

(iii) Hazardous waste must be managed in a manner that minimizes the possibility of a fire, explosion, or release of hazardous waste or hazardous waste constituents to the air, soil, or water which could threaten human health or the environment.

(f) The very small quantity generator shall comply with the hazardous waste manifest provisions in R 299.9309 when it sends its episodic event hazardous waste off site to a designated facility. The very small quantity generator has up to 60 calendar days from the start of the episodic event to manifest and send its hazardous waste generated from the episodic event to a designated facility.

(g) The very small quantity generator shall maintain all of the following records for 3 years from the end date of the episodic event:

(i) The beginning and end dates of the episodic event.

(ii) A description of the episodic event.

(iii) A description of the types and quantities of hazardous wastes generated during the event.

(iv) A description of how the hazardous waste was managed as well as the name of the designated facility that received the hazardous waste.

(v) The name of hazardous waste transporters.

(vi) An approval letter from director if the very small quantity generator petitioned to conduct 1 additional episodic event per calendar year.

(3) A small quantity generator may maintain its existing generator category for hazardous waste generated during an episodic event if the small quantity generator complies with all of the following conditions:

(a) The small quantity generator is limited to 1 episodic event per calendar year, unless a petition is granted under subrules (4) to (7) of this rule.

(b) The small quantity generator shall notify the director no later than 30 calendar days before initiating a planned episodic event using Michigan site identification form EQP5150. In the event of an unplanned episodic event, the small quantity generator shall notify the director within 72 hours of the unplanned event via phone, email, or fax and subsequently submit Michigan site identification form EQP5150. The small quantity generator shall include the start date and end date of the episodic event, the reason(s) for the event, types and estimated quantities of hazardous waste expected to be generated as a result of the episodic event, and shall identify a small quantity generator contact and emergency coordinator with 24-hour telephone access to discuss the notification submittal or respond to an emergency.

(c) The small quantity generator shall have a site identification number or obtain a site identification number using Michigan site identification form EQP5150.

(d) A small quantity generator is prohibited from accumulating hazardous waste generated from an episodic event on drip pads and in containment buildings.

(e) The episodic hazardous waste is managed under 1 or more of the following methods:

(i) In containers and the small quantity generator complies with all of the following:

(A) R 299.9306(1)(d)(i).

(B) Each container is marked or labeled with all of the following:

(I) The words "Episodic Hazardous Waste."

(II) A description of the waste and an indication of the hazards of the contents. The indication of the hazards of the contents may include the applicable hazardous waste characteristic(s), the hazard communication consistent with 49 CFR part 172, subpart E or F, a hazard statement or pictogram consistent with 29 CFR 1910.1200, or a chemical hazard label consistent with the NFPA

standard no. 704.
(III) The date upon which the episodic event began.
(ii) In tanks and the small quantity generator complies with all of the following:
(A) The standards of R 299.9306(1)(d)(ii).
(B) Each tank is marked or labeled with both of the following:
(I) The words "Episodic Hazardous Waste."
(II) A description of the waste and an indication of the hazards of the contents. The indication of the hazards of the contents may include the applicable hazardous waste characteristic(s), hazard communication consistent with 49 CFR part 172, subpart E or F, a hazard statement or pictogram consistent with 29 CFR 1910.1200, or a chemical hazard label consistent with the NFPA standard no. 704.
(C) Use inventory logs, monitoring equipment, or other records to identify the date upon which each episodic event begins.
(D) Keep inventory logs or records with the above information on site and readily available for inspection.
(f) The small quantity generator shall treat the hazardous waste generated from an episodic event on site or manifest and ship the hazardous waste off site to a designated facility within 60 calendar days from the start of the episodic event to manifest and send its hazardous waste generated from the episodic event to a designated facility.
(g) The small quantity generator shall maintain all of the following records for 3 years from the end date of the episodic event:
(i) The beginning and end dates of the episodic event.
(ii) A description of the episodic event.
(iii) A description of the types and quantities of hazardous wastes generated during the event.
(iv) A description of how the hazardous waste was managed as well as the name of the designated facility that received the hazardous waste.
(v) The name of hazardous waste transporters.
(vi) An approval letter from the director if the small quantity generator petitioned to conduct 1 additional episodic event per calendar year.
(4) A very small quantity generator or small quantity generator may petition the director for a second episodic event in a calendar year without impacting its generator category under the following conditions:
(a) If a very small quantity generator or small quantity generator has already held a planned episodic event in a calendar year, the generator may petition the director for an additional unplanned episodic event in that calendar year within 72 hours of the unplanned event.
(b) If a very small quantity generator or small quantity generator has already held an unplanned episodic event in a calendar year, the generator may petition the director for an additional planned episodic event in that calendar year.
(5) The petition must include the following:
(a) The reason(s) why an additional episodic event is needed and the nature of the episodic event.
(b) The estimated amount of hazardous waste to be managed from the event.
(c) How the hazardous waste is to be managed.
(d) The estimated length of time needed to complete management of the hazardous waste generated from the episodic event. This estimated length of time may not exceed 60 days.
(e) Information regarding the previous episodic event managed by the very small quantity generator or small quantity generator, including the nature of the event, whether it was a planned or unplanned event, and how the very small quantity generator or small quantity generator met the conditions.
(6) The petition must be made to the director in writing, either on paper or electronically.

(7) The very small quantity generator or small quantity generator shall retain written approval in its records for 3 years from the date the episodic event ended.

PART 4. TRANSPORTERS OF HAZARDOUS WASTE

R 299.9401 Scope.

Rule 401. (1) This part applies to transporters of hazardous waste if the transportation requires a manifest under part 3 of these rules, and transporters operating under R 299.9309(3).

(2) This part does not apply to on-site transportation of hazardous waste either by generators or by owners or operators of licensed hazardous waste treatment, storage, or disposal facilities.

(3) A transporter of hazardous waste shall also comply with part 3 of these rules relating to hazardous wastes, except for R 299.9311(4) and R 299.9312(1) and (2), and the accumulation time limits specified in R 299.9404(1)(b), if either of the following provisions apply to the transporter:

(a) The transporter is the United States importer of hazardous waste into the state from abroad.

(b) The transporter commingles, by placing the waste in the same container, compatible hazardous waste of different DOT shipping descriptions where the DOT hazard class or the DOT packing group differs in a manner that alters the components of the waste description on the generator's original manifest.

(4) A person who commingles hazardous waste from lab packs shall comply with parts 5, 6, and 7 of these rules if the wastes from the lab packs are mixed.

(5) A transporter of hazardous waste that is being imported from or exported to any other country for the purpose of recovery or disposal shall comply with the requirements of this part and R 299.9314.

(6) This part does not apply to transportation during an explosives or munitions emergency response which is conducted under R 299.9503(2).

R 299.9402 Site identification number.

Rule 402. A transporter shall not transport hazardous wastes without having received a site identification number.

R 299.9403 Transporter requirements.

Rule 403. (1) A person shall not engage in the transportation of hazardous wastes by highway within, into, or through this state without being registered and permitted in accordance with act 138.

R 299.9404 Transfer facility requirements.

Rule 404. (1) A transporter at a transfer facility shall comply with all of the following requirements:

(a) Manage vehicles and hazardous wastes so that hazardous waste and hazardous waste constituents cannot escape into the soil, directly or indirectly into surface or groundwaters, or uncontrolled into drains or sewers and so that fugitive emissions are controlled by closing, covering, or otherwise sealing containers, as required by 49 CFR 173.24(b), at all times unless the container is being filled or emptied of waste or is being cleaned.

(b) Store hazardous wastes, subject to manifesting requirements, in containers meeting the applicable requirements of 49 CFR parts 107 and 172 to 180 for a period of 10 days or less. Storage for a period of more than 10 days requires compliance with the treatment, storage, and disposal facility requirements of parts 5, 6, and 7 of these rules.

(c) Hazardous wastes must not be routed to the same transfer facility more than once during transportation, unless either of the following provisions applies:

(i) The load has been rejected by the treatment, storage, and disposal facility and the load is either being returned to the generator or is being sent to an alternate treatment, storage, and disposal facility.

(ii) A transporter was temporarily unable to deliver the waste for reasons unrelated to the suitability

of the treatment, storage, and disposal facility to manage the waste, such as treatment, storage, and disposal facility maintenance or overbooking or delivery of the load after normal business hours, and rerouting was necessary to ensure subsequent delivery at the designated facility.

(d) When consolidating the contents of 2 or more containers with the same hazardous waste into a new container, or when combining and consolidating 2 different hazardous wastes that are compatible with each other, the transporter shall mark its containers of 119 gallons or less with the following information:

(i) The words "Hazardous Waste."

(ii) The applicable hazardous waste numbers, or in compliance with R 299.9305(1)(e).

(2) A transporter who off-loads hazardous wastes during transportation for the purpose of storage off of the vehicle or conveyance of waste in accordance with R 299.9503(1)(k) shall comply with all of the following requirements.

(a) The requirements of subrule (1) of this rule.

(b) For new activity, before the activity begins, provide notification to the department. Within 30 days of changes to information included in the notification a subsequent notification is required. The notification must include all of the following information:

(i) The transporter name and site identification number.

(ii) The transporter mailing address.

(iii) The transporter telephone number.

(iv) The owner of the transfer facility.

(v) The location and telephone number of all of the transfer facilities.

(vi) A description of the transfer activity performed at each transfer facility location.

(c) Obtain financial capability as specified in R 299.9711 for transfer facilities.

(d) The requirements of 49 CFR parts 130 and 172 to 180, and 40 CFR 263.31 concerning the use and management of containers.

(e) Secondary containment must be sufficiently impervious to prevent any hazardous waste or hazardous waste constituent released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

(f) The requirements of 49 CFR 172.602, 172.702, 172.704, and 177.848 and 29 CFR part 1910, subpart L, and 1910.120(q) and 1910.132 to 1910.138 concerning preparedness and prevention, contingency planning and emergency procedures, and training.

(g) Maintain an inventory log that tracks manifested hazardous waste which is managed at the transfer facility by date of receipt, date of shipment off site, and manifest number. The inventory log, or similar documentation, must also include the date of the weekly inspection of the areas where containers are stored and the results of the inspection, including, at a minimum, any evidence of container failure, the condition of secondary containment, and remediation correcting any problems noted. Except as required in subdivision (a) of this subrule, the requirements of this subrule do not apply when, during transportation, there is a continuous physical link between vehicles or vehicles and pipelines for waste being off-loaded or, in the case of bulk-packagings authorized by 49 CFR 173.240, the break in the link between the transport vehicles is no longer than is necessary to accomplish the immediate transfer of the bulk packagings from 1 vehicle to another vehicle.

(3) Transfer facility operations must not occur at treatment, storage, and disposal facilities.

(4) 49 CFR parts 107, 130, and 171 to 180, and 29 CFR part 1910, subpart L, and 1910.120(q) and 1910.132 to 1910.138 are adopted by reference in R 299.11004.

R 299.9405 Consolidation and commingling of hazardous waste.

Rule 405. (1) A transporter consolidating containers of hazardous waste shall ensure that the original manifest for each hazardous waste container in the consolidated shipment accompanies the

shipment.

(2) A transporter commingling hazardous wastes of the same DOT shipping description if the DOT hazard class and DOT packing group remain the same shall comply with all of the following requirements:

(a) 49 CFR part 173, as applicable.

(b) Conduct commingling, unless performed at the generator location when the load is first received by the transporter, in a secondarily contained area that is sufficiently impervious to prevent any hazardous waste or hazardous waste constituent released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

(c) Ensure that commingled wastes are destined for a single disposal facility.

(d) Ensure that incompatible wastes are not commingled.

(e) Ensure that commingled wastes do not undergo chemical or thermal change or treatment, and ensure that the resultant waste retains both the physical and chemical characteristics similar to the individual wastes before they were commingled.

(f) Ensure that the generator authorizes the commingling in accordance with R 299.9309(4) and places in the special handling instructions and additional information section of the manifest the hazardous waste number followed by the letters "CS" and the associated manifest line item, denoting the commingling activity.

(g) For bulk rail or bulk water shipments, ensure that where the commingling of wastes results in the original shipment being transported to the designated facility by more than 1 vehicle the extra copies of the manifest as provided by the generator in accordance with R 299.9309 accompany each of the vehicles and that the transporter prepares a DOT-approved shipping paper and attaches the shipping paper to the top of the manifest or manifests. The shipping paper must reflect the differences from the original shipment in terms of quantity, count, and DOT-approved packaging.

(h) Ensure that where the commingling of wastes results in changes to the quantity, count, or DOT-approved packaging on the generator manifest or manifests, the transporter prepares a DOT-approved shipping paper and attaches the shipping paper to the top of the manifest or manifests. The shipping paper must reflect the differences from the original shipment in terms of quantity, count, and DOT-approved packaging.

(i) Ensure that, where a commingled load is rejected by the designated facility, all generators contributing to the commingled load are contacted to designate an alternate facility and that the rejected commingled wastes are not returned to any single generator.

(3) A transporter commingling compatible hazardous wastes of different DOT shipping descriptions where the DOT hazard class or DOT packing group differs in a manner that alters the components of the waste description on the generator's original manifest shall comply with all of the following requirements:

(a) Comply with the requirements of subrule (2)(a) to (e) of this rule.

(b) For new activity, before the activity beginning, provide notification to the department. Within 30 days of changes in information included in the original notification a subsequent notification is required. The notification must include all of the following information:

(i) The transporter name and site identification number.

(ii) The transporter mailing address.

(iii) The transporter telephone number.

(iv) The owner of the facility.

(v) If other than the generator site, the location of the facility and the telephone number where commingling activity is performed.

(vi) The description of the commingling activity performed at each facility location.

(c) Prepare a new manifest as a generator in accordance with part 3 of these rules.

(d) On the new manifest in the special handling instructions and additional information section, describe the commingled load by adding the hazardous waste number followed by the letters “CD" and the manifest line item.

(e) Ensure that the transporter-initiated manifest and the generator manifests accompany the shipment to the designated facility. The transporter-initiated manifest must satisfy DOT shipping paper requirements and be segregated from the generator manifests. All generator and transporter manifests must be signed by an authorized representative of the designated facility upon receipt of the waste.

(f) Comply with part 3 of these rules relating to the wastes, except for R 299.9311(4) and R 299.9312(1) and (2) and the accumulation time limits specified in R 299.9404(1)(b).

(g) Ensure that, where a commingled load is rejected by the designated facility, all other generators contributing to the load are contacted to jointly, with the transporter, designate an alternate facility and that the rejected commingled wastes are not returned to any single generator. The transporter, under this part, shares generator responsibility.

R 299.9406 Transporter vehicle requirements.

Rule 406. (1) A transporter shall carry a copy of the registration and permit, issued in accordance with act 138, and make it available for inspection upon request by the director or the director's designee.

(2) A transporter shall close or cover all vehicles or containers used to transport hazardous waste to prevent the escape of hazardous waste or hazardous waste constituents. A transporter shall keep the outside of all vehicles and accessory equipment free of hazardous waste or hazardous waste constituents.

(3) A transporter shall ensure that all portions of vehicles which have been in contact with hazardous waste shall be cleaned of any hazardous waste or hazardous waste constituents and purged of vapor before the transport of any products, incompatible waste, or non-waste material.

(4) A transporter shall protect hazardous waste in the transporter's possession from exposure to weather, fire, physical damage, and vandals.

R 299.9407 Transporter facility inspections.

Rule 407. (1) The department may inspect all in-state stationary facilities in which the transporter owns or holds an interest and at which routine operations associated with the transport of hazardous wastes are performed. Routine operations may include any of the following:

(a) Vehicle storage.

(b) Vehicle cleaning.

(c) Routine mechanical maintenance.

(d) Transfer operations.

(e) Dispatching.

(f) Recordkeeping.

(2) The department shall determine, at the time of an inspection, all of the following:

(a) Based on a visual inspection, whether there is evidence that hazardous wastes or hazardous waste constituents have escaped to the air, soil, surface water, groundwater, drains, or sewers.

(b) If vehicles are cleaned on-site, whether proper procedures exist for wash water disposal.

(c) Whether facilities are constructed or situated so as to minimize the possibility of the release or escape of hazardous waste or hazardous waste constituents to the soil, surface water, or groundwater.

(d) Whether the transporter is in compliance with other requirements of this part.

R 299.9408 Transporter vehicle inspections.

Rule 408. (1) The department may inspect a vehicle to determine compliance with this part of these rules.

R 299.9409 Transporter manifest and recordkeeping requirements.

Rule 409. (1) Hazardous waste transporters shall only transport hazardous waste using a manifest signed in accordance with 40 CFR 262.23, or an electronic manifest that is obtained, completed, and transmitted in accordance with 40 CFR 262.20(a)(3), and signed with in accordance with R 299.9309(2). Hazardous waste transporters shall comply with 40 CFR part 263, subpart B, regarding the manifest system, compliance with the manifest, and recordkeeping.

(2) If the hazardous waste cannot be delivered pursuant to the manifest and 40 CFR 263.21(a), and if the transporter revises the manifest pursuant to 40 CFR 263.21(b)(1), the transporter shall legibly note on the manifest the name and phone number of the person representing the generator from whom instructions have been obtained.

(3) A transporter whose manifested shipment results in a manifest discrepancy, as specified in R 299.9608, and a total or partial rejected shipment must comply with 40 CFR 263.21(b)(2). Before accepting for transportation the rejected portion of the original shipment, the transporter shall confirm that the generator has prepared a new manifest under part 3 of these rules.

(4) A transporter shall retain all records, logs, or documents required under this part for a period of 3 years and make the records, logs, and documents readily available for inspection by the director or his or her designee, upon request. The retention period is extended during any unresolved enforcement action regarding the regulated activity or as otherwise required by the department.

(5) 40 CFR part 263, subpart B, is adopted by reference in R 299.11003. For the purposes of adoption, the term "R 299.9207" replaces the term "§261.7."

R 299.9410 Hazardous waste discharges.

Rule 410. (1) If a fire, explosion, or other discharge of hazardous waste or hazardous waste constituents occurs during transportation that could threaten human health or the environment, or if a transporter has knowledge that a spill has reached surface water or groundwater, then the transporter shall take appropriate immediate action to protect human health and the environment, including notification of local authorities and the department's pollution emergency alerting system - telephone number 800-292-4706. Each notification shall include all of the following information:

(a) Name of the reporter.

(b) Name and address of carrier represented by the reporter.

(c) Telephone number where the reporter can be contacted.

(d) Date, time, and location of the incident.

(e) The extent of injuries, if known.

(f) Classification, name, and quantity of the hazardous waste involved and if a continuing danger to life exists at the scene of the fire explosion, or other discharge.

(2) If a discharge of hazardous waste or hazardous waste constituents occurs during transportation and if a state, local government, or federal official acting within the scope of his or her official responsibilities determines that immediate removal of the waste is necessary to protect human health or the environment, then the official may authorize the removal of the waste, without the preparation of a manifest, by transporters who do not have site identification numbers and a registration and permit under act 138.

(3) A transporter who has discharged hazardous waste or hazardous waste constituents shall comply with all of the following requirements:

(a) Give notice, if required pursuant to 49 C.F.R. §171.15, to the national response center at

800-424-8802 or 202-426-2675.

(b) Report, in writing, as required by 49 C.F.R. §171.16, to the Director, Office of Hazardous Materials Regulations, Materials Transportation Bureau, Department of Transportation, Washington, DC 20590.

(c) Provide notice, if the discharge was from a bulk shipment transported by water, as required by 33 C.F.R. §153.203 for oil and hazardous substances.

(d) Ensure cleanup of any hazardous waste or hazardous waste constituent discharge or take such action as may be required or approved by federal, state, or local officials so that the hazardous waste or hazardous waste constituent discharge no longer presents a hazard to human health or the environment.

(4) The provisions of 33 C.F.R. §153.203 and 49 C.F.R. §§171.15 and 171.16 are adopted by reference in R 299.11004.

R 299.9411 Rescinded.

R 299.9412 Rescinded.

R 299.9413 Land disposal restrictions.

Rule 413. (1) Transporters of hazardous waste-shall comply with the applicable requirements and restrictions of 40 CFR part 268.

(2) 40 CFR part 268 is adopted by reference in R 299.11003. For purposes of adoption, the term "director" replaces the terms "administrator" and "assistant administrator," the term "R 299.9305, R 299.9306, and R 299.9307" replaces the term "§§262.15, 262.16, and 262.17," the term "part 6 of these rules" replaces the term "parts 264 and 265 of this chapter," and the term "part 2 of these rules" replaces the term "subparts C and D of part 261 of this chapter," except in 40 CFR 268.5, 268.6, 268.40(b), 268.42(b), and 268.44(a) to (g) and (i) to (o).

PART 5. OPERATING LICENSES

R 299.9501 Operating licenses for new facilities; and expansion, enlargement, or alteration of existing facilities; applicability.

Rule 501. (1) Except as otherwise specified in R 299.9503, R 299.9524, and subrules (2), (3), and (4) of this rule, issuance of an operating license by the director shall occur before any of the following begins:

(a) The physical construction of a new treatment, storage, or disposal facility.

(b) The expansion or enlargement beyond the previously authorized design capacity or area of a treatment, storage, or disposal facility.

(c) The alteration of the method of treatment or disposal previously authorized at a treatment or disposal facility to a different method of treatment or disposal. A change in only the types and quantity of waste treated, stored, or disposed of, without an expansion, enlargement, or alteration of the facility, shall not require a new operating license. Such a change may require modification of the operating license as set forth in this part or, for facilities operating without a license in accordance with the provisions of R 299.9502(3), (4), or (5), submittal by the owner or operator of a revised part A application before such a change.

(2) Each method of treatment or disposal requires a separate operating license. Either or both of the following may be authorized under an operating license for treatment or disposal:

(a) Storage associated with such treatment or disposal.

(b) Wastewater treatment facilities treating wastewater generated from the treatment or disposal of a hazardous waste.

(3) If the director finds an imminent and substantial endangerment to human health or the environment, the director may issue a temporary emergency operating license to a nonlicensed facility to allow treatment, storage, or disposal of hazardous waste or to a licensed facility to allow treatment, storage, or disposal of a hazardous waste not covered by an effective operating license. These activities shall not be subject to the operating license requirements of part 111 of the act and these rules for new facilities or the expansion, enlargement, or alteration of existing facilities. An emergency operating license may be oral or written. If oral, it shall be followed in 5 days by a written emergency operating license. The emergency operating license may be terminated by the director at any time if he or she determines that termination is appropriate to protect human health and the environment. An emergency operating license shall comply with all of the following requirements:

(a) It shall not exceed 90 days in duration.

(b) It shall clearly specify the hazardous wastes to be received and the manner and location of their treatment, storage, or disposal.

(c) It shall be accompanied by a public notice published in accordance with R 299.9513, including all of the following information:

(i) Name and address of the office granting the emergency authorization.

(ii) Name and location of the licensed facility.

(iii) A brief description of the wastes involved.

(iv) A brief description of the action authorized and the reasons for authorizing it.

(v) Duration of the emergency operating license.

(d) It shall incorporate, to the extent possible and not inconsistent with the emergency situation, all applicable requirements of this part and part 6. An emergency operating license shall not be subject to the licensee fees specified by R 299.9510. The licensee shall pay for the cost of all public notices required by these rules for the emergency operating license.

(4) The director may issue a temporary operating license to any person who proposes to utilize, for

research purposes, an innovative and experimental hazardous waste treatment technology or process for which standards have not been promulgated under these rules. Such licensed activities shall be exempt from the requirements of part 111 of the act and these rules for new facilities or the expansion, enlargement, or alteration of existing facilities, and, for the purpose of expediting the review and issuance of operating licenses under this subrule, the director may, consistent with the protection of human health and the environment, modify or waive the license application requirements of R 299.9508, except that the director shall not waive rules regarding financial responsibility, including insurance, or waive the public participation process specified in R 299.9511. A temporary operating license issued by the director under this subrule shall be in compliance with all of the following provisions:

(a) Provide for the construction of facilities, as necessary, and for the operation of the facilities for not more than 1 year, unless renewed, except that any operating license issued under this subrule shall not be renewed more than 3 times and each renewal shall be for a period of not more than 1 year.

(b) Provide for the receipt and treatment by the facility of only those types and quantities of hazardous waste which the director determines 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.

(c) Require compliance with the requirements of part 6 of these rules for any hazardous waste storage, and include such other requirements as the director deems necessary to protect human health and the environment, such as requirements regarding any of the following:

(i) Monitoring.

(ii) Operation.

(iii) Insurance or bonding.

(iv) Financial responsibility.

(v) Closure.

(vi) Remedial action.

(d) Include such requirements as the director deems necessary regarding testing and the providing of information to the director with respect to the operation of the facility.

(5) A temporary operating license issued under subrule (3) or (4) of this rule may be terminated by the director at any time if he or she determines that termination is necessary to protect human health or the environment.

R 299.9502 Operating licenses for existing facilities; applicability and general application requirements.

Rule 502. (1) Part 111 of the act requires an operating license for the treatment, storage, and disposal of any hazardous waste, except for those facilities identified in subrules (3), (4), and (5) of this rule and except as provided in R 299.9623, as identified or listed in parts 2 and 8 of these rules. Requirements for remedial action plans, special forms of operating licenses, are specified in R 299.9524. The terms "treatment," "storage," "disposal," and "hazardous waste" are defined in part 1 of these rules. Owners or operators of hazardous waste management units shall have an operating license during the active life of the unit, including the closure period. Owners or operators of surface impoundments, landfills, land treatment units, and waste pile units that received wastes after July 26, 1982, or that certified closure after January 26, 1983, shall have an operating license for the postclosure period, unless they demonstrate closure by removal pursuant to subrules (8) and (9) of this rule or they obtain an enforceable document in place of an operating license for the postclosure period, as provided for in subrule (12) of this rule. If an operating license for the postclosure period is required, then the license shall incorporate the applicable groundwater monitoring, corrective action, and postclosure care requirements of part 6 of these rules. The denial of an operating license

for the continued operation of a hazardous waste management facility or unit does not affect the requirement of obtaining a postclosure operating license. Owners or operators of certain facilities require operating licenses that are issued pursuant to part 111 of the act and, in addition, permits that are issued pursuant to other programs for certain aspects of the facility operation. Operating licenses that are issued pursuant to part 111 of the act are required for all of the following:

(a) Injection wells that dispose of hazardous waste, except as provided by R 299.9503(3)(a).

(b) The treatment, storage, or disposal of hazardous waste at facilities that require a permit pursuant to part 31 of the act, except as provided by R 299.9503(3)(b).

(c) Barges or vessels that dispose of hazardous waste by ocean disposal and onshore hazardous waste treatment or storage facilities that are associated with an ocean disposal operation.

(2) An owner or operator of a facility that is licensed pursuant to part 111 of the act on the effective date of these rules may continue to operate under the existing license if all of the following conditions are met:

(a) The facility is being operated in compliance with its existing operating license, the applicable statutory and regulatory requirements promulgated under part 111 of the act after license issuance, as required pursuant to R 299.9516, and all other applicable environmental statutes.

(b) The facility is either of the following:

(i) A facility which qualifies for interim status pursuant to 40 C.F.R. §270.70 and which is in compliance with all of the following provisions:

(A) Has filed a part A application pursuant to 40 C.F.R. §270.10(e).

(B) Has amended the part A application, as necessary, pursuant to 40 C.F.R. §270.10(g).

(C) Has not had interim status terminated pursuant to 40 C.F.R. §270.73.

(D) Has complied with the applicable provisions of 40 C.F.R. part 265 and §270.71 and the applicable provisions of parts 6 and 8 of these rules.

(E) Has not made changes to the hazardous waste management facility during interim status that amount to reconstruction of the facility. Reconstruction occurs when the capital investment in the changes to the facility is more than 50% of the capital cost of a comparable entirely new hazardous waste management facility. Changes pursuant to this subparagraph do not include changes made solely for the purpose of complying with the requirements of R 299.9615 for tanks and ancillary equipment. Changes pursuant to this subparagraph do not include changes made solely for the purposes of managing wastes generated from releases that originate within the facility boundary, pursuant to R 299.9503(4)(c).

(ii) A facility which is permitted pursuant to 40 C.F.R. part 270 and which is in compliance with the permit or license issued.

(c) The owner or operator submits an application for a new license to the director not less than 180 days before license expiration.

(d) The owner or operator complies with all applicable requirements of parts 6, 7, and 8 of these rules.

(3) An owner or operator of a storage facility that is in existence on March 30, 1983, and that is subject to the licensing requirements of part 111 of the act solely due to the 1982 amendments to part 111 of the act may continue to operate until such time as the director acts upon the facility's application for an operating license, if all of the following conditions are met:

(a) The facility is in compliance with subrule (2)(b) of this rule.

(b) The owner or operator submits a complete operating license application within 180 days after being requested to do so by the director.

(c) The owner or operator complies with the applicable requirements of parts 6, 7, and 8 of these rules and all applicable environmental statutes.

(4) The owner or operator of a treatment, storage, or disposal facility that is in existence on the

effective date of amendments to part 111 of the act or these rules that render the facility subject to the licensing requirements of part 111 of the act may continue to operate until such time as the director acts upon the owner or operator's application for an operating license, if the conditions of subrule (3)(a), (b), and (c) of this rule are met.

(5) An owner or operator of a facility that is in existence on January 1, 1980, and which is subject to the licensing requirements of part 111 of the act, but which has not yet obtained an operating license pursuant to part 111 of the act, may continue to operate until such time as the director acts upon the facility's application for an operating license if the owner or operator meets the conditions of subrule (3)(a), (b), and (c) of this rule.

(6) Allowing continued operation pursuant to subrules (2) to (5) of this rule does not do any of the following:

(a) Reduce the owner or operator's responsibility to dispose of all hazardous waste in a manner that protects the environment and human health.

(b) Eliminate or reduce past, present, or future liability incurred during the operation.

(c) Restrict the ability of state or local governmental agencies to take action to enforce existing laws, statutes, rules, or regulations.

(7) A person who proposes to initiate the operation of any treatment, storage, or disposal facility shall submit, to the director, on forms provided by the director or his or her designee, an operating license application that sets forth the information required by R 299.9508.

(8) Owners or operators of surface impoundments, land treatment units, and waste piles closing by removal or decontamination pursuant to 40 C.F.R. part 265 standards shall obtain an operating license for the postclosure period, unless the owners or operators can provide an equivalency demonstration to the director that the closure met the standards for closure by removal or decontamination specified in 40 C.F.R. §§264.228, 264.280(e), or 264.258, respectively. The demonstration shall be made as follows:

(a) If the owner or operator has submitted an operating license application for the postclosure period, the owner or operator may request a determination, based on information contained in the application, that 40 C.F.R. part 264 closure-by-removal standards were met. If the director determines that 40 C.F.R. part 264 standards were met, then he or she shall notify the public of his or her proposed decision, allow for public comment, and reach a final determination according to the procedures in subrule (9) of this rule.

(b) If the owner or operator has not submitted an operating license for the postclosure period, then the owner or operator may petition the director for a determination that an operating license for the postclosure period is not required because the closure was in compliance with the applicable 40 C.F.R. part 264 closure standards. The petition shall include all data which demonstrates that closure by removal or decontamination standards were met or the petition shall demonstrate that the unit closed pursuant to state requirements that met or exceeded the applicable 40 C.F.R. part 264 closure by removal standard. The director shall approve or deny the petition according to the procedures outlined in subrule (9) of this rule.

(9) If a facility owner or operator seeks an equivalency demonstration pursuant to subrule (8) of this rule, the director shall do all of the following:

(a) Provide the public, through a newspaper notice, the opportunity to submit written comments on the information submitted by the owner or operator within 30 days from the date of the notice.

(b) In response to a request, hold a public hearing concerning the equivalence of the 40 C.F.R. part 265 closure to a 40 C.F.R. part 264 closure and give public notice of the hearing not less than 30 days before it occurs.

(c) Determine whether the 40 C.F.R. part 265 closure met the 40 C.F.R. part 264 closure by removal or decontamination requirements within 90 days of receipt of the petition.

(d) If the director finds that the closure did not meet the applicable standards of 40 C.F.R. part 264, then provide the owner or operator with a written statement of the reasons why the closure failed to meet 40 C.F.R. part 264 standards.

(10) If the director determines, pursuant to subrule (9) of this rule, that a closure was not in compliance with the applicable 40 C.F.R. part 264 standards, then the owner or operator may submit additional information in support of an equivalency demonstration within 30 days after receiving a written statement from the director. The director shall review any additional information submitted and make a final determination within 60 days. If the director determines that the facility did not close pursuant to 40 C.F.R. part 264 closure by removal standards, then the facility is subject to operating license requirements for the postclosure period.

(11) Owners or operators of waste military munitions treatment and disposal facilities may continue to accept waste munitions if all of the following conditions are met:

(a) The facility was in existence as a hazardous waste facility and already licensed to handle waste military munitions, on the effective date on which the waste munitions became subject to regulation under these rules.

(b) On or before the effective date on which the waste military munitions became subject to regulation under these rules, the licensee submits an operating license modification to remove or amend the license provisions which restrict the receipt of off-site waste munitions.

(c) The licensee submits a complete modification request within 180 days of the effective date on which the waste munitions became subject to regulation under these rules.

(12) At the discretion of the director, an owner or operator may obtain, in place of an operating license for the postclosure period, an enforceable document that satisfies the requirements of R 299.9508(3) and (4), R 299.9612, and R 299.9629. The director, in issuing enforceable documents under this subrule, shall assure a meaningful opportunity for public involvement which, at a minimum, includes public notice and opportunity for public comment when the department becomes involved in a remediation at the facility as a regulatory or enforcement matter, on the proposed preferred remedy and the assumptions upon which the remedy is based, in particular those related to land use and site characterizations, and at the time of a proposed decision that remedial action is complete at the facility. The public notice and public comment requirements of this subrule may be modified if the facility meets either of the following conditions:

(a) If the director determines that even a short delay in the implementation of a remedy would adversely affect human health or the environment, the director may delay compliance with the public notice and public comment requirements of this subrule and implement the remedy immediately. However, the director shall assure involvement of the public at the earliest opportunity, and, in all cases, upon making the decision that additional remedial action is not needed at the facility.

(b) The director may allow a remediation initiated before October 22, 1998 to substitute for corrective action required under a postclosure license even if the public involvement requirements of this subrule have not been met so long as the director assures that notice and comment on the decision that no further remediation is necessary to protect human health and the environment takes place at the earliest reasonable opportunity after October 22, 1998.

(13) The provisions of 40 C.F.R. §§264.96, 264.117, 265.111, 265.114, 270.10(e) and (g), 270.70, 270.71, and 270.73 and part 265, except subparts E, H, and DD and 40 C.F.R. §§265.112(d)(1), 265.115, and 265.120, are adopted by reference in R 299.11003, with the exception that the word "director" shall replace the term "regional administrator."

R 299.9503 Operating licenses; exemptions.

Rule 503. (1) The following persons do not require an operating license under part 111 of the act, MCL 324.11101 to 324.11153:

(a) Persons who own or operate a facility that treats, stores, or disposes of hazardous waste in compliance with parts 31, 55, and 115 of the act, MCL 324.3101 to 324.3134, 324.5501 to 324.5542, and 324.11501 to 324.11554, if the only hazardous wastes the facility treats, stores, or disposes of are excluded from regulation under R 299.9304.

(b) Generators who accumulate hazardous waste on site for less than the time periods provided in R 299.9305 to R 299.9307.

(c) Farmers who dispose of waste pesticides from their own use in compliance with R 299.9204(3)(b).

(d) Owners or operators of totally enclosed treatment facilities.

(e) Owners or operators of elementary neutralization units.

(f) Owners or operators of wastewater treatment units, if the following conditions, as applicable, are met:

(i) The units are subject to regulation under section 402 or 307(b) of the federal clean water act, 33 USC 1342 or 1317(b).

(ii) The units are located on the site of a generator and do not treat hazardous waste from any other generator unless the waste is shipped entirely by pipeline or the off-site generator has the same owner as the facility at which the unit is located.

(iii) If an owner or operator is diluting D001 waste, other than D001 high TOC subcategory waste as defined in 40 CFR 268.40, or D003 waste, to remove the hazardous characteristic before land disposal, the owner or operator complies with the requirements of 40 CFR 264.17(b) and 265.17(b), as applicable.

(g) Transporters storing manifested shipments of hazardous waste in containers at a transfer facility for a period of 10 days or less, if the transfer facility requirements of R 299.9404 are met.

(h) Persons adding absorbent material to hazardous waste in a container, and persons adding hazardous waste to absorbent material in a container, if all of the following conditions are met:

(i) The actions occur at the site of generation when hazardous waste is first placed in the container.

(ii) Liquids are not absorbed in materials that biodegrade or that release liquids when compressed.

(iii) The provisions of 40 CFR 264.17(b), 264.171, and 264.172 are met.

(i) Generators who have on-site treatment facilities if a generator complies with all of the following requirements:

(i) All treatment is conducted in either containers or tanks.

(ii) If the treatment occurs in containers, then all of the following requirements are met:

(A) The requirements of 40 CFR part 265, subpart I, except 40 CFR 265.173.

(B) The containers holding hazardous waste are always closed, except when it is necessary to add, remove, or treat the waste.

(C) The containers holding hazardous waste are not opened or handled in a manner that may rupture the containers or cause them to leak.

(D) The containment requirements of 40 CFR 264.175.

(E) The generator documents the inspections required under 40 CFR 265.174.

(iii) If the treatment occurs in tanks, the requirements of 40 CFR part 265, subpart J, except for 40 CFR 265.197(c) and 265.200.

(iv) The requirements of 40 CFR part 265, subpart C.

(v) The area where the waste is treated is protected, as appropriate for the type of waste being treated, from weather, fire, physical damage, and vandals.

(vi) Hazardous waste treatment is conducted so that hazardous waste or hazardous waste constituents cannot escape by gravity into the soil, directly or indirectly, into surface or groundwaters, or into drains or sewers and so that fugitive emissions are not in violation of part 55 of the act, MCL 324.5501 to 324.5542.

(vii) The closure standards of 40 CFR 265.111 and 265.114.

(viii) All treatment is completed within 90 days from the date that accumulation of the waste began if the generator is a large quantity generator or within 180 days from the date that the accumulation of the waste began if the generator is a small quantity generator.

(ix) Documentation is maintained on site that specifies the date that accumulation of the waste began, the date that treatment of the waste began, and the date that treatment of the waste was completed.

(x) The requirements of R 299.9602, R 299.9603(1)(b) to (f) and (4), R 299.9604, R 299.9627, and R 299.9633.

(j) Universal waste handlers and universal waste transporters when handling the wastes identified in R 299.9228(1). Universal waste handlers and universal waste transporters are subject to R 299.9228 when handling the universal wastes identified in R 299.9228(1).

(k) Owners or operators who use a pipeline for the sole purpose of transferring wastes to and from treatment or storage tanks at the facility and bulk railcars at an off-site transfer facility, if all of the following requirements are met:

(i) The pipeline is owned and operated by the owner or operator.

(ii) The pipeline meets the requirements for ancillary equipment under 40 CFR part 264, subpart J.

(iii) Wastes are not stored in the pipeline.

(iv) The owner or operator establishes as part of their waste analysis plan procedures for receipt of the wastes by the facility to and from the transport vehicle.

(v) The owner or operator uses the pipeline solely as a method of transferring wastes and not as an extension of the facility boundary beyond the area specified in their current operating license or authorization.

(l) Owners or operators of facilities which store military munitions that have been classified as a waste in accordance with part 2 of these rules unless otherwise specified in R 299.9817.

(2) A person who is engaged in treatment or containment activities during immediate response to a discharge of a hazardous waste, an imminent and substantial threat of a discharge of hazardous waste, a discharge of a material that, when discharged, becomes a hazardous waste, or an immediate threat to human health, public safety, property, or the environment, from the known or suspected presence of military munitions, other explosive material, or an explosive device, as determined by an explosive or munitions emergency response specialist shall not be subject to the operating license requirements of part 111 of the act, MCL 324.11101 to 324.11153, and these rules. 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 this part and part 6 of these rules, except as provided in subrule (4) of this rule. 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. In the case of emergencies involving military munitions, the responding military emergency response specialist's organizational unit shall retain records for 3 years identifying the dates of the response, the responsible persons responding, the type and description of material addressed, and its disposition.

(3) The following are considered to have an operating license and are not subject to the operating license requirements of part 111 of the act, MCL 324.11101 to 324.11153, and these rules for new facilities or expanded, enlarged, or altered existing facilities if the listed conditions are met:

(a) The owner or operator of an injection well disposing of hazardous waste, if the owner or operator meets all of the following requirements:

(i) Has a permit for underground injection that is issued pursuant to 40 CFR parts 124, 144, 145, 146, and 147, subpart X.

(ii) Complies with the conditions of the permit and the requirements of 40 CFR 144.14.

(iii) Has a permit for underground injection that is issued pursuant to 40 CFR parts 124, 144, 145, 146, and 147, subpart X, and that is issued after November 8, 1984, and complies with both of the following:

(A) R 299.9629, Corrective action.

(B) Where the underground injection well is the only unit at a facility that requires a permit, complies with 40 CFR 270.14(d).

(b) The owner or operator of a publicly owned treatment works that accepts hazardous waste for treatment if the waste is in compliance with all federal, state, and local pretreatment requirements that would be applicable to the waste if it were being discharged into the publicly owned treatment works (POTW) through a sewer, pipe, or similar conveyance, if the owner or operator has a national pollutant discharge elimination system (NPDES) permit and the owner or operator complies with the conditions of the permit, and if the owner or operator complies with all of the following requirements:

(i) 40 CFR 264.11, Identification number.

(ii) R 299.9608, Use of manifest system.

(iii) R 299.9609, Operating record; availability, retention and disposition of records.

(iv) R 299.9610, Reporting.

(v) For NPDES permits issued after November 8, 1984, R 299.9629, Corrective action.

(4) The director shall exempt persons who conduct the following activities from the operating license requirements of part 111 of the act, MCL 324.11101 to 324.11153, and these rules, but only if the exemption does not constitute a less stringent permitting requirement than is required under RCRA:

(a) The treatment of hazardous waste during the closure of a treatment, storage, or disposal unit, if both of the following conditions apply:

(i) The treatment occurs at the site of generation.

(ii) The treatment is authorized in a closure plan approved by the director or his or her designee.

(b) Closure of an existing surface impoundment for hazardous waste that is closed as a landfill pursuant to R 299.9616(3), if the closure is authorized in a closure plan approved by the director or his or her designee and an operating license is obtained for the postclosure period.

(c) The treatment, storage, or disposal of hazardous waste at the individual site of generation if conducted solely in response to, or as corrective action under, and in full compliance with, a plan developed or approved by the director, or his or her designee, under part 31, 111, 201, or 213 of the act, MCL 324.3101 to 324.3134, 324.11101 to 324.11153, 324.20101 to 324.20142, and 324.21301a to 324.21334, or an administrative or judicial consent order to which the director is a party and if the treatment, storage, or disposal is conducted in accordance with the technical standards of part 6 of these rules.

(d) Treatment, storage, or disposal of hazardous waste at the individual site of generation, if conducted solely in response to, or as a corrective action under, and in full compliance with CERCLA.

(5) 40 CFR parts 124, 144, 145, 146, 147, and 265, subparts I and J, except 40 CFR 265.197(c) and 265.200, and 40 CFR 264.11, 264.17(b), 264.171, 264.172, 264.175, 265.111, 265.114, and 268.7(a)(4) are adopted by reference in R 299.11003.

R 299.9504 Operating license application for new facilities; the expansion, enlargement, or alteration of existing facilities; content.

Rule 504. (1) In addition to the information required pursuant to subrule (18) of this rule, all

applications for an operating license for a new facility or the expansion, enlargement, or alteration of an existing facility shall include all of the following items:

(a) An application fee or deposit as calculated pursuant to R 299.9507.

(b) General information that is required pursuant to 40 C.F.R. §270.13.

(c) General information that is required pursuant to 40 C.F.R. §270.14(b) and (d).

(d) A hydrogeological report that contains the information required pursuant to R 299.9506.

(e) An environmental assessment, including a failure mode assessment that provides an analysis of the potential major methods by which safe handling of hazardous wastes may fail at a treatment, storage, or disposal facility. The owner or operator of a facility that stores, treats, or disposes of hazardous waste in a surface impoundment or a landfill shall include, in the environmental assessment, information that is 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, the information shall address all of the following subjects:

(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 waste or constituents resulting from the releases described in paragraph (i) of this subdivision.

(iii) The potential magnitude and nature of the human exposure resulting from the releases described in paragraph (i) of this subdivision.

(f) An environmental monitoring program that is in compliance with R 299.9611.

(g) Engineering plans of all process equipment and containment structures at the facility. The plans shall be prepared and sealed by a registered professional engineer and shall include all of the following information:

(i) Plan views, elevations, sections, and supplementary views that, together with general layout drawings, provide working information for the review of the facility.

(ii) Specifications on all construction materials and installation methods.

(iii) The basis of design for all process equipment and containment structures.

(iv) A flow diagram of the entire treatment, storage, or disposal process.

(v) The design capacity of each process.

(h) A written summary of the comments received at the preapplication meeting required by R 299.9511(1) and the applicant's response to the comments, including any revisions to the application.

(2) Applicants proposing to store containers of hazardous waste shall submit the information required pursuant to 40 C.F.R. §270.15(a) to (e) in an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility.

(3) Applicants proposing to store or treat hazardous waste in tanks shall submit the information required pursuant to 40 C.F.R. §270.16(a) to (k) in an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility.

(4) Applicants proposing to incinerate or thermally treat hazardous waste in a hazardous waste incinerator that becomes subject to the licensing requirements of these rules after October 12, 2005, and applicants of existing hazardous waste incinerators shall submit either of the following in an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility. If the owner or operator demonstrates compliance with the air emission standards and limitations in 40 C.F.R. part 63, subpart EEE, by conducting a comprehensive performance test and submitting to the director a notification of compliance under 40 C.F.R. §§63.1207(j) and 63.1210(b) which documents compliance with all applicable requirements of 40 C.F.R. part 63, subpart EEE, then the requirements of this subrule do not apply, except those provisions the director determines are necessary to ensure compliance with 40 C.F.R. §§264.345(a) and (c) if the owner or

operator elects to comply with 40 C.F.R. §270.235(a)(1)(i) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. The director may apply this subrule, on a case-by-case basis, for collecting information pursuant to subrules (18) and (20) of this rule and R 299.9521(3)(b) and (c):

(a) A trial burn plan containing the information listed in 40 C.F.R. §270.62(a) to (d) and a statement that suggests the conditions necessary to operate in compliance with the performance standards of 40 C.F.R. §264.343 during the trial burn. The statement shall include, at a minimum, restrictions on waste constituents, waste feed rates, and the operating parameters identified in 40 C.F.R. §264.345.

(b) In place of a trial burn plan, the information specified in 40 C.F.R. §270.19(c). The director shall approve an application without a trial burn plan if he or she determines both of the following:

(i) The wastes are sufficiently similar.

(ii) The incinerator units are sufficiently similar and the data from other trial burns are adequate to specify operating conditions that will ensure that the performance standards of 40 C.F.R. §264.343 will be met by the incinerator.

(5) Applicants proposing to treat hazardous waste shall submit all of the following information in an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility:

(a) A demonstration of how the method and process proposed for the treatment of each hazardous waste will do any of the following:

(i) Change the physical, chemical, or biological character or composition of the waste.

(ii) Neutralize the waste.

(iii) Recover energy or material resources from the waste.

(iv) Render the waste nonhazardous, safer for handling or transport, amenable to recovery, amenable to storage, or reduced in volume.

(v) Chemically bind or render the toxic constituents nonhazardous rather than only diluted.

(b) The proper treatment technique, the proper feed rates of treatment chemicals or reagents, and the proper operating conditions, such as temperature, pressure, and flow rate, for the types of hazardous wastes proposed for treatment, and the accuracy of the devices intended to measure these parameters.

(c) If the hazardous waste or treatment chemicals or reagents will have any detrimental effect on the materials used for construction, such as causing corrosion, dissolution, saltings, or sealings. If detrimental effects are possible, then the method of controlling them shall be specified.

(d) If the hazardous waste contains any constituents or contaminants that may interfere with the intended treatment process or decrease the effectiveness of the treatment and, if so, how the interferences will be controlled.

(e) If the hazardous waste contains constituents or contaminants that may cause the release of toxic gases or fumes during the intended treatment and, if so, how they will be controlled.

(f) If the hazardous waste contains constituents or contaminants that may form toxic constituents with the treatment chemicals or reagents during the intended treatment and, if so, how they will be controlled.

(g) Trial tests, including bench scale, pilot plant scale, or other appropriate tests, on each hazardous waste that is new or significantly different from hazardous waste previously treated to verify the information required in subdivision (b) of this subrule.

(6) Applicants proposing to treat or store hazardous wastes in surface impoundments shall submit the following information in an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility:

(a) The information required for surface impoundments pursuant to 40 C.F.R. §270.17(a) to (j).

(b) Information on the proposed liner, leachate collection, and leak detection, collection, and

removal systems, as specified in R 299.9505.

(7) Applicants proposing to treat or store hazardous waste in waste piles shall submit the following information in an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility:

(a) The information required for waste piles pursuant to 40 C.F.R. §270.18.

(b) For new waste piles, information on the proposed liner, leachate collection, and leak detection, collection, and removal systems, as specified in R 299.9505.

(8) Applicants proposing to landfill hazardous waste shall submit all of the following information in an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility:

(a) The information required for landfills pursuant to 40 C.F.R. §270.21.

(b) Information on the proposed liner, leachate collection, and leak detection, collection, and removal systems, as specified in R 299.9505.

(c) Detailed engineering plans and an engineering report describing the final cover that will be applied to the landfill or each landfill cell pursuant to R 299.9619.

(9) Applicants proposing to dispose of hazardous wastes by land treatment shall submit the information required pursuant to 40 C.F.R. §270.20 in an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility.

(10) Applicants proposing facilities that treat, store, or dispose of hazardous waste in miscellaneous units shall submit the information required pursuant to 40 C.F.R. §270.23 in an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility.

(11) Applicants proposing facilities that store or dispose of hazardous waste in an underground mine or cave shall submit all of the following information in an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility:

(a) A geologic report that contains the following information:

(i) For the receiving formation and other formations that are within 30 feet above and below the receiving formation, an applicant shall provide all of the following information:

(A) The depth from the surface.

(B) Thickness.

(C) Permeability.

(D) Solubility.

(E) Reactivity.

(F) Compatibility.

(G) Composition.

This information shall be obtained by performing not less than 5 borings for the first 5 acres of the entire mine or cave and 3 borings for each additional 5 acres. Each boring site shall consist of a ceiling boring and a floor boring.

(ii) For the formations that are overlying the receiving formation for a lateral extent of not less than 5 miles from the facility boundary, an applicant shall provide all of the following information:

(A) The depth from the surface.

(B) Thickness.

(C) Composition.

(D) The identification of water, oil, or gas-bearing formations.

This information shall be obtained from existing geological information and reports.

(b) An assessment of the potential for water intrusion into the mine or cave. This assessment shall be used in the evaluation pursuant to R 299.9628(3)(a).

(c) Information on the means of transporting waste from any surface operation to the final disposal or storage area in the receiving formation and information on the means of preventing the release of

hazardous constituents during transportation.

(d) An assessment of the structural stability of the mine or cave.

(e) Information on the proposed means of controlling the use, access, and penetration of the mine or cave.

(f) A demonstration that a sufficient buffer zone or other control exists to ensure that off-site activities will not adversely impact the integrity of the mine or cave.

(g) A proposed means of correlating waste placement locations to surface locations and a waste placement map.

(h) A proposed means of managing water in the mine or cave so as to maintain the integrity of the mine or cave and protect human health and the environment throughout the facility's active life and after closure of the facility.

(12) Applicants proposing hazardous waste treatment, storage, or disposal facilities that have process vents to which R 299.9630 applies shall submit the information required pursuant to 40 C.F.R. §270.24 in an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility.

(13) Applicants proposing hazardous waste treatment, storage, or disposal facilities that have equipment to which R 299.9631 applies shall submit the information required pursuant to 40 C.F.R. §270.25 in an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility.

(14) Applicants proposing treatment, storage, or disposal facilities that collect, store, or treat hazardous waste on drip pads shall submit the information required pursuant to 40 C.F.R. §270.26 in an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility.

(15) Applicants proposing to burn hazardous waste in a boiler or industrial furnace shall submit the information required pursuant to 40 C.F.R. §270.22 in an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility.

(16) Applicants proposing hazardous waste treatment, storage, or disposal facilities that have tanks, surface impoundments, or containers to which R 299.9634 applies shall submit the information required pursuant to 40 C.F.R. §270.27 in an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility.

(17) Operating license applications for a new facility or the expansion, enlargement, or alteration of an existing facility shall be signed and certified pursuant to 40 C.F.R. §270.11. In addition, the application shall be signed by the titleholder of the land upon which the facility is proposed to be located.

(18) The director may require a licensee or applicant to submit additional information to establish license conditions pursuant to R 299.9521.

(19) A licensee or applicant may demonstrate to the director, or his or her designee, that less information than that specified in this rule is necessary to determine conformance with the requirements of part 6 of these rules and establish license conditions pursuant to this part. If the licensee or applicant demonstrates that less information is required, the director, or his or her designee, shall waive the information requirement, except that the director, or his or her designee, shall not require less information than is required by RCRA.

(20) If the director concludes, based on 1 or more of the factors listed in 40 C.F.R. §270.10(l)(1), that compliance with the standards of 40 C.F.R. part 63, subpart EEE alone may not be protective of human health or the environment, the director shall require additional information or assessments to determine if 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 or the environment resulting from both direct and indirect exposure pathways. The director may also

require a licensee or applicant to provide the information necessary to determine if such an assessment should be required.

(21) The provisions of 40 C.F.R. §§264.343, 264.345, 266.102(e), 266.104 to 266.107, 270.10(l)(1), 270.11, 270.13, 270.14(b) and (d), 270.15(a) to (e), 270.16(a) to (k), 270.17(a) to (j), 270.18, 270.19(c), 270.20, 270.21, 270.22, 270.23, 270.24, 270.25, 270.26, 270.27, 270.62(a) to (d), 270.66, and 270.235(a)(1)(i) are adopted by reference in R 299.11003, with the exception that the term "waste management unit" shall replace the term "solid waste management unit."

R 299.9505 Operating license application for new facilities; and expansion, enlargement, or alteration of existing facilities; liner systems for landfills, surface impoundments, and waste piles.

Rule 505. (1) Applicants proposing a landfill, surface impoundment, or waste pile shall submit the following information in the engineering report for the liner, leachate collection system, and leak detection, collection, and removal system:

(a) Information concerning the vertical and horizontal isolation distance from groundwater and any dewatering system necessary to meet the isolation requirements of R 299.9603(5). All of the following information shall be submitted for dewatering systems:

(i) Design calculations for drain pipe diameter and spacing.

(ii) Design features that allow cleaning of drainage pipes to prevent clogging within the system.

(iii) Evaluation of corrosive resistance and structural suitability of underdrain pipe under both static and dynamic loadings.

(b) Information concerning soils to be used for any compacted soil liner, including, at a minimum, all of the following:

(i) Source of the soils.

(ii) Uniformity of the soil source.

(iii) Classification of the soil under the unified soil classification system, according to ASTM standard D2487-11, which is adopted by reference in R 299.11001.

(iv) Particle size distribution according to both sieve and hydrometer testing.

(v) The moisture-density relationship of the soil according to the modified proctor test, ASTM standard D1557-12, or the standard proctor test ASTM standard D698-12, which are adopted by reference in R 299.11001.

(vi) The compaction necessary to achieve a permeability with water not greater than 1.0×10^{-7} cm/sec., and the permeability of the soil under a compaction of 90% of the maximum dry density, as determined by the modified proctor test, ASTM standard D1557-12, or 95% of the maximum dry density, as determined by the standard proctor test, ASTM standard D698-12.

(vii) The permeability of the soil under the conditions of paragraph (vi) of this subdivision utilizing liquid similar to the leachate that would be expected from the proposed facility.

(viii) Procedures for complying with the quality control requirements of R 299.9621.

(c) Information on any synthetic liner to be used, including all of the following:

(i) Methods of storage, handling, and installation, including any written instructions from the manufacturer and procedures for complying with the quality control requirements of R 299.9621.

(ii) Physical properties of the liner material, such as the following:

(A) Thickness.

(B) Resiliency.

(C) Elongation.

(D) Tensile strength.

(E) Breaking strength.

(F) Tear strength.

(G) Dimensional stability.
(H) Bonded seam strength.
(I) Hydrostatic resistance.
(J) Ply adhesion.
(K) Volatile loss.
(L) Water extraction.
(M) Water absorption.
(iii) Ability of liner material to maintain physical properties under all of the following prolonged and varying conditions expected at the proposed facility:
(A) Temperature.
(B) pH.
(C) Ultraviolet radiation.
(D) Biological attack.
(E) Leachate composition.
(d) Information on the characteristics of soils underlying any compacted or synthetic liner. This information shall include all of the following:
(i) Settlement analysis which estimates total and differential settlement, including immediate settlement, primary consolidation, and secondary consolidation based on maximum loading.
(ii) Strength analysis which determines the bearing capacity and stability of the underlying soils.
(iii) Slope stability analysis, including all of the following information:
(A) Side slope stability under excavation.
(B) Liner system stability under construction.
(C) Waste mass stability during filling sequence.
(D) Final cover stability.
(E) Long-term postclosure stability.
(iv) Performance under varying groundwater conditions.
(v) Potential for bottom heave or blowout.
(e) Information on the design of the leachate collection system and the leak detection, collection, and removal system. Such information shall include, at a minimum, all of the following:
(i) Calculations to determine the anticipated volume of leachate to be generated.
(ii) The granular material to be used to allow adequate flow and removal of liquid and to provide an aggregate envelope for collection pipe.
(iii) The design of collection pipe, including all of the following information:
(A) Diameter.
(B) Perforations.
(C) Slope.
(D) Spacing.
(E) Chemical resistance.
(F) Structural integrity under static and dynamic loadings.
(iv) Procedures to prevent clogging.
(v) The design of the leachate removal system, including all of the following information:
(A) Leachate inflow.
(B) Sump dimensions.
(C) Pump on and off levels.
(D) Effective storage volume of sump.
(E) Riser pipe.
(F) Total discharge head of pump.
(G) Pump selection.

(H) Pump cycle time.

(vi) Calculations which demonstrate that the leachate head will be 12 inches (30 centimeters) or less above the liner at any point, except the sump.

(f) Information on stormwater management. Such information shall include, at a minimum, all of the following:

(i) Run-on volumes, systems, and management plans.

(ii) Runoff volumes, systems, and management plans.

(iii) Stormwater discharge system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(2) Applicants proposing a landfill, surface impoundment, or waste pile shall submit a construction quality assurance plan which includes a description of all of the following:

(a) The responsibility and authority of all organizations and key personnel involved in licensing, designing, and constructing the hazardous waste land disposal facility.

(b) The qualifications of inspection personnel to demonstrate that they possess the training and experience necessary to fulfill their identified responsibilities.

(c) The observations, tests, and sampling that will be used to monitor the installation of the hazardous waste disposal facility in accordance with R 299.9621, including a description of all of the following:

(i) Sampling activities.

(ii) Sample size.

(iii) Frequency of testing.

(iv) Acceptance and rejection criteria.

(v) Plans for implementing corrective measures.

(d) A description of how construction quality assurance data will be recorded.

R 299.9506 Hydrogeological reports; content.+

Rule 506. (1) A hydrogeological report shall include all of the following information:

(a) A summary of the groundwater monitoring data obtained during the interim status period pursuant to the provisions of 40 C.F.R. part 265, subpart F, where applicable, and a summary of any other groundwater monitoring data collected pursuant to state or federal law.

(b) Identification of the uppermost aquifer and aquifers hydraulically interconnected to the uppermost aquifer beneath the facility property, including groundwater flow direction and rate, and the basis for the identification.

(c) Identification of any aquifer utilized by public and private wells within 2,000 feet of the proposed site.

(d) Identification of all other aquifers evidenced by available well or boring logs.

(e) The delineation of all of the following on the topographic map required pursuant to the provisions of 40 C.F.R. §270.14(b)(19):

(i) The waste management area and any other treatment or storage areas.

(ii) The property boundary.

(iii) The proposed point of compliance, as defined pursuant to the provisions of 40 C.F.R. §264.95.

(iv) The proposed location of groundwater monitoring wells as required pursuant to the provisions of 40 C.F.R. §264.97.

(v) To the extent possible, the information required pursuant to the provisions of subdivision (b) of this subrule.

(f) On the topographic map required pursuant to the provisions of 40 C.F.R. §270.13(1), identification of all domestic, municipal, industrial, oil, and gas wells and soil borings within 1 mile of the site in all directions for which copies of logs are available.

(g) A description of any plume of contamination that has entered the groundwater from a hazardous waste management unit or other regulated activity at the site at the time that the application was submitted that does both of the following:

(i) Delineates the extent of the plume on the topographic map required pursuant to the provisions of 40 C.F.R. §270.14(b)(19).

(ii) For landfills, surface impoundments, land treatment units, and waste piles, identifies the concentration of each constituent listed in the provisions of 40 C.F.R. part 261, appendix VIII, throughout the plume or identifies the maximum concentrations of each constituent in the plume.

(2) A hydrogeological report shall include detailed plans and an engineering report describing the proposed groundwater monitoring program to be implemented to meet the requirements of R 299.9612 or a justification for a waiver pursuant to the provisions of subrule (7) of this rule. The engineering report shall include all of the following information for this purpose:

(a) Soil boring logs and the results of soil sampling from the borings that are sufficient to adequately define soil and groundwater conditions at the site. All of the following procedures shall be utilized in collecting the data:

(i) Not less than 5 soil borings shall be made for the first 5 acres of the site, and 3 borings shall be made for each additional 5 acres or portion thereof. A lesser number of borings may be made for nonactive portions of the site, such as buffer zones, and by supplementing boring information with geophysical testing, such as resistivity surveys. Soil borings shall be located in a grid pattern so that there is a minimum of 1 boring in each major geomorphic feature, such as ridges, lowlands, and drainage swales, and all borings shall extend not less than 30 feet below proposed grade or the anticipated bottom elevation of any installed or constructed liner.

(ii) At each boring, soil samples shall be collected from each soil layer or change in lithology. Two of the 5 soil borings that are required by the provisions of paragraph (i) of this subdivision shall be evaluated and logged using continuous sampling methods, such as continuous tube sampling, coring, or continuously driven split spoons. For sites that are larger than 5 acres, 1 of each of the 3 additional soil borings that are required by the provisions of paragraph (i) of this subdivision shall be evaluated and logged using continuous sampling methods. Samples that are collected from each soil layer or change in lithology shall be tested for all of the following:

(A) Particle size distribution by both sieve and hydrometer.

(B) Atterburg limits according to ASTM standard D4318-10, which is adopted by reference in R 299.11001.

(C) Classification pursuant to the unified soil classification system, according to ASTM standard D2487-11, which is adopted by reference in R 299.11001.

(iii) Each soil layer at a site shall be evaluated for both of the following:

(A) Moisture content, according to ASTM standards D6913-04 and D7928-16, which are adopted by reference in R 299.11001.

(B) Permeability with water by the triaxial cell method as described in the EPA document entitled "Soil Properties, Classification, and Hydraulic Conductivity Testing," which is adopted by reference in R 299.11008; constant head method, according to ASTM standard D2434-68, which is adopted by reference in R 299.11001; approved in-situ field method; or other method approved by the director. All soil samples collected for determination of permeability shall be collected by standard undisturbed soil sampling techniques, such as a 3-inch diameter Shelby tube or large diameter split spoon.

(iv) Boring logs shall include all of the following:

(A) Soil and rock descriptions.

(B) Method of sampling.

(C) Sample depth.

(D) Date of boring.
(E) Water level measurements.
(F) Soil test data.
(G) Boring location.
(H) Standard penetration number by ASTM standard D1586-11, which is adopted by reference in R 299.11001.
(v) All soil borings that are not converted to observation wells pursuant to the provisions of subdivision (b) of this subrule shall be carefully backfilled, plugged, and recorded in accordance with the provisions of the well installation and well decommissioning procedures in ASTM standards D5092-04 and D5299-14, or a plan approved by the director.
(vi) All elevations shall be corrected to USGS datum.
(b) Static water level measurements from observation wells and, where appropriate, well clusters which are located at the sites of soil borings and which are constructed in accordance with the provisions of R 299.9612. Measurements shall be accurate to the nearest 0.01 foot, corrected to USGS datum, and shall be taken from not less than 3 observation wells and 1 well cluster for the first 5 acres of the facility or portion thereof and 1 observation well for each additional 10 acres or portion thereof. Landfills, surface impoundments, waste piles, and land treatment facilities shall have not less than 3 well clusters established as part of the monitor well system and at least 1 cluster well for each 20 acres of the proposed site. All observation wells shall be constructed and abandoned in accordance with the well installation and well decommissioning procedures in ASTM standards D5092-04 and D5299-14, or a plan approved by the director.
(c) A water level contour map based on stabilized water level readings and using values contoured on an interval of not more than 1 foot.
(d) If more than 2 well clusters have been constructed, then groundwater flow net diagrams illustrating horizontal and vertical flow directions of groundwater.
(e) The location and depth of all observation wells and evidence that these observation wells are located effectively to detect hazardous constituents from the facility, based on all of the following:
(i) Groundwater flow direction.
(ii) Velocity.
(iii) Horizontal and vertical gradients.
(iv) Thickness of the saturated zone.
(v) The dispersion properties of hazardous waste constituents, such as the following:
(A) Specific gravity.
(B) Solubility.
(C) Chemical reactivity within the formation.
(D) Characteristics of decomposition products.
(f) At each soil boring that is to be completed as an observation well during or following the hydrogeologic investigation, the lithology of that soil boring shall be continuously sampled, logged, and classified pursuant to the unified soil classification system in accordance with ASTM standard D2487-11, which is adopted by reference in R 299.11001, from an elevation of 10 feet above the expected screened interval to the base of the borehole. Continuous sampling tubes, coring devices, or continuously collected split spoon samples may be used to satisfy this requirement. The director may allow the substitution of alternate information for this requirement or waive this requirement based on available information, site-specific hydrogeologic conditions, and available technology.
(3) If the presence of hazardous constituents has not been detected in the groundwater at the time of license application, then the owner or operator shall submit sufficient information, supporting data, and analysis to establish a detection monitoring program that is in compliance with the requirements

of R 299.9612 and the provisions of 40 C.F.R. §264.98. The submission shall include all of the following:

(a) A proposed list of primary and secondary monitoring parameters and proposed monitoring frequencies for these parameters.

(b) A proposed groundwater monitoring system.

(c) Background values for each proposed primary and secondary monitoring parameter or procedures to calculate such values.

(d) A description of proposed sampling, analysis, and statistical comparison procedures to be utilized in evaluating groundwater monitoring data.

(e) Procedures for preventing cross-contamination in wells during activities such as well installation, purging, or sampling.

(f) Evidence that sampling procedures and well construction materials are compatible with proposed monitoring parameters.

(4) If the presence of hazardous constituents has been detected in the groundwater at the point of compliance at the time of license application, the owner or operator shall submit sufficient information, supporting data, and analysis to establish a compliance monitoring program that is in compliance with the requirements of R 299.9612 and the provisions of 40 C.F.R. §264.99. The submission shall include all of the following:

(a) A description of the wastes previously handled at the facility.

(b) A characterization of the contaminated groundwater, including concentrations of hazardous constituents.

(c) A list of hazardous constituents for which compliance monitoring will be undertaken in accordance with the provisions of R 299.9612 and 40 C.F.R. §§264.97 and 264.99.

(d) Proposed concentration limits for each hazardous constituent which do not exceed the background level of that constituent in the groundwater or which do not exceed a concentration limit that is not less stringent than allowed pursuant to the provisions of RCRA.

(e) Detailed plans and an engineering report describing the proposed groundwater monitoring system in accordance with the requirements of 40 C.F.R. §264.97.

(f) A description of proposed sampling, analysis, and statistical comparison procedures to be utilized in evaluating groundwater monitoring data.

(5) If hazardous constituents have been measured in the groundwater that exceed the concentration limits established pursuant to the provisions of 40 C.F.R. §264.94(a)(2), Table l, or if groundwater monitoring conducted at the time of the license application indicates the presence of hazardous constituents from the facility in groundwater over background concentrations, then the owner or operator shall submit sufficient information, supporting data, and analyses to establish a corrective action program that is in compliance with the requirements of R 299.9612 and the provisions of R 299.9629. To demonstrate compliance with the provisions of R 299.9612 and R 299.9629, the owner or operator shall address, at a minimum, all of the following items:

(a) A characterization of the contaminated groundwater, including concentrations of hazardous constituents.

(b) The concentration limit for each hazardous constituent found in the groundwater, which shall not exceed the background level of that constituent found in the groundwater at the time that limit is specified in the operating license.

(c) Detailed plans and an engineering report describing the corrective action to be taken.

(d) A description of how the groundwater monitoring program will demonstrate the adequacy of the corrective action.

(6) For landfills, surface impoundments, waste piles, and land treatment units, a hydrogeological report shall include all of the following additional information that is necessary to determine site

suitability and facility design:

(a) For each boring made pursuant to the provisions of subrule (2) of this rule, all of the following tests at intervals of not more than 5 feet or change in geologic formation:

(i) Particle size distribution by both sieve and hydrometer.

(ii) Atterburg limits according to ASTM standard D4318-10, which is adopted by reference in R 299.11001.

(iii) Classification pursuant to the unified soil classification system according to ASTM standard D2487-11, which is adopted by reference in R 299.11001.

(b) For each boring mad pursuant to the provisions of subrule (2) of this rule, the following tests at intervals of not more than 10 feet:

(i) Permeability, by any of the following methods:

(A) The triaxial cell method, as described in the EPA document entitled "Soil Properties, Classification and Hydraulic Conductivity Testing," which is adopted by reference in R 299.11008.

(B) The constant head method, according to ASTM standard D2434-68, which is adopted by reference in R 299.11001.

(C) An in-situ field method approved by the director.

(D) Other methods approved by the director.

(ii) Moisture content, according to ASTM standards D6913-04 and D7928-16, which are adopted by reference in R 299.11001.

(c) Soil boring logs and the results of soil sampling from such borings that are sufficient to adequately define bedrock conditions at the site.

(d) Additional information for determining the geotechnical characteristics of each soil layer at the site, such as any of the following:

(i) Shear strength.

(ii) In-situ density.

(iii) Specific gravity.

(iv) Stress deformation.

(v) Shrinkage limit.

(vi) Clay mineralogy.

(vii) Information on the presence of cracks, fissures, and other voids that may increase the effective permeability of the soil.

(e) A series of geologic cross sections or fence diagrams referenced to a site map and illustrating all of the following:

(i) Existing topography.

(ii) Soil borings.

(iii) Soil classification.

(iv) Stratigraphy and other properties.

(v) Bedrock.

(vi) Wells.

(vii) Stabilized water level readings and proposed site grades.

(f) Water budget calculations under present site conditions, future active operations, and, for disposal facilities, the postclosure period. The calculations shall consider all of the following factors:

(i) Precipitation.

(ii) Evaporation.

(iii) Runoff.

(iv) Infiltration.

(v) Evapotranspiration.

(vi) Groundwater flow velocities and volume.

(vii) Soil moisture-holding capacity.

(viii) For disposal facilities, the capacity of proposed waste types to hold moisture.

(7) The director may waive or substitute alternate information for the information specified in subrule (2) or (6) of this rule based on site-specific considerations and available technology.

(8) The provisions of 40 C.F.R. §§264.94(a)(2), table 1, 264.95, 264.97, 264.98, 270.13(l), and 270.14(b)(19) and part 265, subpart F, are adopted by reference in R 299.11003.

R 299.9507 Operating license for new facilities; and expansion, enlargement, or alteration of existing facilities; application fees.

Rule 507. (1) The applicant shall calculate the operating license for new facilities and the expansion, enlargement, or alteration of existing facilities application fee by totalling the appropriate fees in table 501 of R 299.9523. Each application requires a separate application fee.

(2) A check made payable to the state of Michigan for the calculated fee shall be attached to the application for an operating license for new facilities and the expansion, enlargement, or alteration of existing facilities. The check shall include the term "HWOL" in the comment section.

(3) If an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility is not resubmitted after being found to be administratively incomplete, the application fee, minus the cost of all public notices published or broadcast, shall be refunded.

(4) If an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility is denied, no portion of the application fee shall be refunded.

(5) An applicant who makes a reapplication for a revised proposal within 6 months of denial shall be assessed only the actual costs to review the revised proposal. These actual costs shall not exceed the calculated fee from table 501 of R 299.9523.

(6) An applicant who withdraws an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility within 14 days of receipt by the director shall have 70% of the original application fee, minus the cost of all public notices published or broadcast, refunded.

(7) An applicant who withdraws an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility within 30 days of receipt by the director shall have 35% of the original application fee, minus the cost of all public notices published or broadcast, refunded.

(8) An applicant who withdraws an application between 30 and 60 days after receipt by the director shall be issued a refund which is equal to 20% of the original application fee, minus the cost of all public notices published or broadcast.

R 299.9508 Operating license application for existing facilities; contents.

Rule 508. (1) An application for an operating license for existing facilities shall include all of the following, except as provided for in subrule (3) of this rule:

(a) The names and addresses of the owner and the operator, including the name and address of the titleholder of the land on which the treatment, storage, or disposal facility is constructed; the location and description of the disposal facility; and other information pertinent to evaluation of the facility which is required by the director on an application form provided by the director.

(b) All information required for an operating license application for new facilities or the expansion, enlargement, or alteration of existing facilities pursuant to R 299.9504.

(c) For a treatment, storage, or disposal facility which has an operating license for a new facility or the expansion, enlargement, or alteration of an existing facility under part 111 of the act, any revisions to the cost estimates for closure and for postclosure maintenance and monitoring submitted with the operating license application for the new facility or the expansion, enlargement, or alteration

of an existing facility, and a written certification of construction pursuant to sections 23(2) and 25(9) of part 111 of the act.

(d) A certification of the treatment, storage, or disposal facility's capability for disposing of hazardous waste, except as provided in subdivision (g) of this subrule. The certification shall be prepared and sealed by a registered professional engineer.

(e) Proof of financial capability as required by part 7 of these rules.

(f) Proof of issuance of all necessary state environmental permits for construction and operation of the treatment, storage, or disposal facility or portion of the facility.

(g) An owner or operator of a facility which meets the criteria of R 299.9502(2), (3), and (4) who cannot demonstrate compliance as required under sections 23(2) and 25(9) of part 111 of the act shall submit a written program designed to bring the facility into compliance with part 111 of the act and these rules within 2 years from the date of license issuance. At a minimum, the program shall specify the necessary modifications to any procedure, equipment, process, or portion of the facility, together with the expected dates of completion. The provisions of this subdivision may only be exercised in the first operating license application after the effective date of these rules and shall not be exercised in subsequent applications for license renewal.

(h) An application fee of $500.00.

(i) For a landfill, proof that an instrument imposing a restrictive covenant upon the land involved has been executed by all the owners of the tract of land upon which the landfill is to be located and by the director, as required by section 39 of part 111 of the act.

(2) The director shall waive the hydrogeological report requirements of R 299.9506 for existing facilities other than landfills, surface impoundments, waste piles, or land treatment facilities if all treatment, storage, and waste-handling activities take place inside or under a structure that provides protection from precipitation and run-on and if the facility is in compliance with part 6 of these rules.

(3) An application for an operating license for the postclosure period shall include all of the following information, unless the director determines that additional information specified in R 299.9505, R 299.9506, or R 299.9508 is necessary:

(a) The information specified in 40 C.F.R. §270.14(b)(1), (4) to (6), (11), (13), (14), (18), and (19) and (d).

(b) The information specified in R 299.9506.

(c) The most recent postclosure cost estimate prepared in accordance with R 299.9702.

(d) A copy of the documentation required to demonstrate compliance with R 299.9703.

(4) Owners or operators shall submit the same information required in subrule (3) of this rule when an alternate authority is used in place of an operating license for the postclosure period as provided for in part 5 of these rules.

(5) Operating license applications for existing facilities shall be signed and certified in accordance with the provisions of 40 C.F.R. §270.11 and by the title holder of the land upon which the facility is located.

(6) The provisions of 40 C.F.R. §§270.11 and 270.14(b) and (d) are adopted by reference in R 299.11003.

R 299.9509 Submittal and processing of operating license applications for new facilities or the expansion, enlargement, or alteration of existing facilities.

Rule 509. (1) Any person who requires an operating license for a new facility or the expansion, enlargement, or alteration of an existing facility under part 111 of the act shall complete, sign, and submit, to the director, an application for each operating license for a new facility or expansion, enlargement, or alteration of an existing facility-required under R 299.9501 as described in this rule. All applicants for operating licenses for new facilities or the expansion, enlargement, or alteration of

existing facilities shall provide the information in R 299.9504 to the director on the application form provided by the director.

(2) The director shall not begin processing an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility until the application ~~it~~ is complete. An application for an operating license for a new facility or the expansion, enlargement, or alteration of an existing facility is complete when the director receives an application which includes all the information required by section 23(2) of part 111 of the act and R 299.9504. The completeness of any application for an operating license for a new facility or the expansion, enlargement, or alteration of an existing facility shall be judged independently of the status of any other permit or permit application for the same facility. The statutory timetable of section 25(4) of part 111 of the act and the timetable of subrule (4) of this rule shall begin upon receipt of a complete operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility.

(3) When a facility or activity is owned by 1 person, but is operated by another person, it is the operator's duty to obtain an operating license for a new facility or the expansion, enlargement, or alteration of an existing facility, except that the owner and titleholder of the land shall also sign the permit application.

(4) The director, or his or her designee, shall notify the applicant within 30 days after receipt of an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility. Such notification shall include the date of receipt and whether any required items of an administrative nature were missing. This notice will not include all areas where the application is technically incomplete.

(5) The director, or his or her designee, shall notify the applicant of the operating license for a new facility or the expansion, enlargement, or alteration of an existing facility status within 75 days after the complete application is received.

(6) The director shall recommend approval or shall deny an operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility within 120 days after the director receives a complete application.

(7) If the director intends to deny the operating license application for a new facility or the expansion, enlargement, or alteration of an existing facility, the director, or his or her designee, shall commence a public participation process in accordance with R 299.9511.

(8) The director shall either prepare a draft operating license for a new facility or the expansion, enlargement, or alteration of an existing facility or deny the operating license. The director shall commence a public participation process in accordance with R 299.9511.

(9) Applicants shall keep records of all data used to complete operating license applications for new facilities or the expansion, enlargement, or alteration of existing facilities and any supplemental information submitted under R 299.9504 for a period of not less than 3 years from the date the application is signed.

R 299.9510 Submittal and processing of operating license applications for existing facilities.

Rule 510. (1) Any person who requires an operating license for an existing facility under part 111 of the act shall complete, sign, and submit, to the director, an application for each license required under R 299.9502, as described in this rule. Persons with interim status currently authorized to operate without a license as provided by R 299.9502 shall apply for operating licenses when required by the director. Procedures for applications, issuance and administration of emergency operating licenses, and research licenses are found exclusively in R 299.9501.

(2) All applicants for operating licenses for existing facilities shall provide the information in R 299.9508 to the director and shall use the application form provided by the director.

(3) The director, or his or her designee, shall not begin the processing of an operating license

application for an existing facility until it is complete, except for emergency operating licenses under R 299.9501. An application for an operating license is complete when the director receives an application which includes that information required by R 299.9508. The completeness of any application for an operating license shall be judged independently of the status of any other permit or permit application for the same facility.

(4) When a facility or activity is owned by 1 person, but is operated by another person, it is the operator's duty to obtain an operating license for the existing facility, except that the owner and titleholder of the land shall also sign the license application.

(5) Any hazardous waste treatment, storage, or disposal facility with an effective operating license shall submit a new license application under R 299.9508 not less than 180 days before the expiration date of the existing operating license, unless permission for a later date has been granted by the director. The director shall not grant permission for applications to be submitted later than the expiration date of the existing operating license.

(6) The director shall make a final decision on an operating license application for an existing facility within 140 days after the director receives a complete application.

(7) Before making a final decision on an operating license for an existing facility, the director shall, when authorized under the provisions of 40 C.F.R. part 271, complete the public participation process specified in R 299.9511. The director may extend the 140-day deadline of subrule (6) of this rule to complete this process.

(8) Applicants shall keep records of all data used to complete operating license applications for existing facilities and any supplemental information submitted under R 299.9508 for a period of not less than 3 years from the date the application is signed.

(9) The director may separately license treatment, storage, and disposal facility units at the same facility if these units have different owners or operators or if these units have significantly different impacts or potential impacts on public health and the environment.

R 299.9511 Public participation procedures.

Rule 511. (1) Except as provided for in subrule (2) of this rule, the requirements of this subrule apply to any person required to obtain an operating license under the act or these rules. Applicants shall comply with all of the following requirements:

(a) Before submission of an application, the applicant shall hold at least 1 public meeting to solicit comments from the public and inform the public of the proposed hazardous waste management activities.

(b) The applicant shall post a sign-in sheet or otherwise provide an opportunity for the preapplication meeting attendees to provide their names and addresses.

(c) The applicant shall provide notice of the preapplication meeting not less than 30 days in advance of meeting. The applicant shall maintain documentation of the preapplication meeting notice and provide the documentation to the director upon request. The notice of the preapplication meeting must comply with the following requirements:

(i) The notice must include all of the following information:

(A) The date, time, and location of the meeting.

(B) A brief description of the purpose of the meeting.

(C) A brief description of the facility and proposed operations, including, the facility address and a map of the facility location.

(D) A statement encouraging persons to contact the facility not less than 72 hours before the meeting if they require special accommodations to participate in the meeting.

(E) The name, address, and telephone number of the applicant's contact person.

(ii) The notice must be provided by the applicant in all of the following forms:

(A) Published as a display advertisement in a newspaper of general circulation in the county or equivalent jurisdiction that hosts the proposed location of the facility. If the director determines that publication in newspapers of general circulation in the adjacent counties or equivalent jurisdictions is necessary to inform the affected public, the director shall advise the applicant to provide a notice in those newspapers.

(B) Posted as a notice on a clearly marked sign at or near the facility. If the applicant places the sign on the facility property, the sign must be large enough to be readable from the nearest point where the public would pass by the facility.

(C) Broadcast a notice at least once on 1 local radio station or television station. The applicant may employ another medium with prior approval from the director.

(d) The applicant shall provide a copy of the newspaper publication of the preapplication meeting notice to the director and the appropriate units of state and local government in accordance with 40 CFR 124.10(c)(1)(x).

(2) The requirements of subrule (1) of this rule do not apply to any of the following:

(a) A renewal operating license application that does not propose any significant changes in facility operations. As used in this subdivision, "significant changes" means any changes that would qualify as a major modification under R 299.9519.

(b) An operating license application that is submitted solely to address postclosure requirements or postclosure and corrective action requirements.

(c) An operating license modification submitted in accordance with R 299.9519.

(d) An operating license application submitted before the effective date of these rules.

(3) Except as provided for in subrule (4) of this rule, the director shall comply with all of the following requirements upon receipt of an operating license application under the act or these rules:

(a) Within a reasonable period of time after the application is received, provide the facility mailing list and appropriate units of state and local government with notice in accordance with 40 CFR 124.10(c)(1)(ix) and (x) that the application has been submitted to the department and is available for review. The notice must include all of the following information:

(i) The name, address, and telephone number of the applicant's contact person.

(ii) The name, address, and telephone number of the department's contact.

(iii) The mailing address to which information, comments, and inquiries may be submitted to the department throughout the application review process.

(iv) The address to which persons may write to be placed on the facility mailing list.

(v) The location where a copy of the application and any supporting documents may be viewed and copied.

(vi) A brief description of the facility and proposed operations, including, the facility address or a map of the facility location, on the front page of the notice.

(vii) The date that the application was received by the department.

(b) Concurrent with the notice provided in subdivision (a) of this subrule, place the application and any supporting documents in a location accessible to the public in the vicinity of the facility or at an appropriate department office.

(4) The requirements of subrule (3) of this rule do not apply to either of the following:

(a) An operating license application that is submitted solely to address postclosure requirements or postclosure and corrective action requirements.

(b) A minor operating license modification as specified in R 299.9519(5) and (9).

(5) The director shall comply with all of the following requirements upon receipt of an operating license application under the act or these rules:

(a) Assess the need, on a case-by-case basis, for an information repository based on the following information:

(i) The level of public interest.
(ii) The type of facility.
(iii) The presence of an existing repository.
(iv) The proximity of the facility to the nearest copy of the administrative record.
(b) If it is determined that an information repository is needed at any time after submittal of the application, notify the applicant that he or she must establish and maintain an information repository in compliance with the following requirements:
(i) The information repository must include all documents, reports, data, and information considered 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 information repository.
(ii) The information repository must be located and maintained at a site selected by the applicant. However, if the director finds that the site selected by the applicant is unsuitable for the purposes or persons for which the information repository is established, due to problems with the location, hours of availability, access, or other relevant considerations, the director shall specify a more appropriate site for the information repository.
(iii) The information repository must be maintained and updated by the applicant for the time period specified by the director.
(c) Specify the requirements for informing the public about the information repository. At a minimum, the director shall require the applicant to provide a written notice about the information repository to all individuals on the facility mailing list.
(d) Based on the factors outlined in subdivision (a) of this subrule, make decisions regarding the appropriateness of closing the information repository and notify the applicant accordingly.
(6) For applications for incinerators, boilers, or industrial furnaces, the director shall provide notice to all persons on the facility mailing list and to the appropriate units of state and local government in accordance with 40 CFR 124.10(c)(1)(ix) and (x) announcing the following:
(a) The scheduled commencement and completion dates for the trial burn. The notice must 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 department. The notice, which must be issued before the applicant may commence the trial burn, must contain all of the following information:
(i) The name, address, and telephone number of the applicant's contact person.
(ii) The name, address, and telephone number of the department's contact person.
(iii) The location where the approved trial burn plan and any supporting documents may be reviewed and copied.
(iv) The expected time period for commencement and completion of the trial burn.
(b) The department's intention to approve the trial burn plan in accordance with the timing and distribution requirements of 40 CFR 270.62(b)(6) and 270.66(d)(3) as applicable. The notice must contain all of the following information:
(i) The name, address, and telephone number of the facility contact person.
(ii) The name, address, and telephone number of the department's contact person.
(iii) The location where the approved trial burn plan and any supporting documents may be reviewed and copied.
(iv) A schedule of the activities that are required as part of an operating license for a new facility or the expansion, enlargement, or alteration of an existing facility, or for existing facilities, before license issuance, including the anticipated time for department approval of the trial burn plan and the time period during which the trial burn will be conducted.
(7) Before making a final decision on a major license modification or operating license application, the director or his or her designee shall, when authorized under 40 CFR part 271, do the following:

(a) Prepare either a draft major license modification, operating license, or a notice of intent to deny.
(b) For major facilities, prepare a fact sheet under R 299.9512 that briefly sets forth the significant factual, methodological, and policy questions considered in preparing the draft major license modification, operating license, or notice of intent to deny and send this fact sheet to the applicant and, upon request, any other person.
(c) Publish a public notice that a draft operating license or notice of intent to deny has been prepared and allow not less than 45 days for public comment.
(d) Publish a public notice that a draft major license modification has been prepared and allow not less than 60 days for public comment.
(e) Provide public notice of any public hearing scheduled pursuant to R 299.9514 not less than 30 days before the hearing date.
(f) Prepare and make available to the public a response to comments on the draft major license modification, operating license, or notice of intent to deny, which must do all of the following:
(i) Specify which provisions of the draft major license modification or operating license have been changed, if any, and the reasons for the changes.
(ii) Briefly describe and respond to all significant comments raised during the public comment period or any hearing.
(iii) Indicate whether the comment period is to be reopened or extended.
(iv) For notices of intent to deny, the reasons for denial.
(8) If the director decides to prepare a draft operating license, he or she shall prepare a license that contains the information specified in R 299.9521.
(9) Draft major license modifications and licenses that are prepared by the director pursuant to this rule must be accompanied by a fact sheet pursuant to R 299.9512, publicly noticed pursuant to R 299.9513, and made available for public comment. The director shall give notice of the opportunity for a public hearing pursuant to R 299.9514, issue a final decision, and respond to comments pursuant to R 299.9515.

R 299.9512 Fact sheets.
Rule 512. A fact sheet on a draft operating license~~,~~ or notice of intent to deny shall include all of the following information after the director is authorized under the provisions of 40 C.F.R. part 271 to administer and enforce part 111 of the act and these rules instead of the federal program:
(a) A brief description of the type of facility or activity that is subject to a final decision.
(b) The type and quantity of wastes, fluids, or pollutants that are proposed to be or are being treated, stored, disposed of, injected, emitted, or discharged.
(c) Reasons why any requested variances or alternatives to minimum standards do or do not appear justified.
(d) A description of the procedures for reaching a final decision, including all of the following:
(i) The beginning and ending dates of the comment period under R 299.9511(7)(c) and the address where comments will be received.
(ii) Procedures for requesting a hearing and the nature of that hearing.
(iii) Other procedures by which the public may participate in the final decision.
(e) Name and telephone number of a person to contact for more information.

R 299.9513 Public notices.
Rule 513. (1) Public notices of draft operating licenses, notices of intent to deny, and public hearings must be given by the following methods after the director is authorized under 40 CFR part 271 to enforce and administer part 111 of the act, MCL324.11101 to 324.11153, and these rules instead of the federal program:

(a) By mailing a copy of the notice, fact sheet, operating license application, and draft operating license to all of the following entities:
(i) The applicant.
(ii) Any other agency that the director knows has issued or is required to issue an environmental permit for the same facility.
(iii) Federal and state agencies with jurisdiction over any of the following:
(A) Fish, shellfish, and wildlife resources.
(B) Coastal zone management plans.
(C) The advisory council on historic preservation.
(D) State historic preservation officers.
(E) Other appropriate government authorities, including any affected states.
(iv) Any unit of local government having jurisdiction over the area where the facility is proposed to be located.
(v) Each state agency having any authority under state law with respect to the construction or operation of the facility.
(b) By mailing a copy of the notice to persons on a facility mailing list developed pursuant to subrule (3) of this rule.
(c) By any 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.
(d) By publication of a notice in a daily or weekly major local newspaper of general circulation and by broadcasting over local radio stations. The director may replace the radio broadcast with another medium that provides at least an equivalent means of notification.
(e) By posting the notice at the principal office of the department and any other locations considered appropriate by the director.
(2) All public notices required by this rule must contain all of the following information:
(a) Name and address of the office processing the operating license.
(b) Name and address of the applicant and the facility at issue.
(c) A brief description of the business conducted at the facility or activity described in the application or draft license.
(d) Name, address, and telephone number of a person or agency from whom interested persons may obtain further information, including copies of the draft operating license, fact sheet, and application.
(e) A brief description of the comment procedures required by R 299.9511 and the time and place of any hearing that will be held, including a statement of procedures to request a hearing and other procedures by which the public may participate in the final decision.
(f) For notices of public hearings, all of the following information:
(i) References to the date of previous public notices relating to the application.
(ii) Date, time, and place of the hearing.
(iii) A brief description of the nature and purpose of the hearing, including the applicable rules and procedures.
(iv) Any other information required by act 306.
(g) Any additional information considered necessary and proper.
(3) The director or his or her designee shall develop a facility mailing list which includes the following persons:
(a) Those who request in writing to be on the list.
(b) Participants from past application proceedings under part 111 of the act, MCL 324.11101 to 324.11153, in that area.
(4) The director or his or her designee shall notify the public of the opportunity to be put on the

mailing list through publication.

R 299.9514 Public hearings.

Rule 514. (1) During the public comment period provided under R 299.9511(7)(c), any interested person may submit written comments to the director on the draft operating license~~,~~ or notice of intent to deny and may request a public hearing if no hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised at the hearing. All comments shall be considered in making the final decision on a public hearing and shall be answered as provided in R 299.9515.

(2) The director or his or her designee shall hold a public hearing if 1 of the following occurs:

(a) The director finds, on the basis of responses, a significant degree of interest in a draft operating license or notice of intent to deny.

(b) The director determines that a hearing may clarify 1 or more issues involved in the final decision on an operating license.

(c) The director receives written notice of opposition to a draft operating license or notice of intent to deny within 45 days of the notice required pursuant to R 299.9511(7)(c).

(3) Public notice of the hearing shall be given as specified in R 299.9513.

(4) During a public hearing, any person may submit oral or written statements and data concerning the draft operating license or notice of intent to deny. The public comment period under R 299.9511(7)(c) shall automatically be extended to the close of any public hearing under this rule. The hearings officer may also extend the comment period by so stating at the hearing.

(5) When possible, the director or his or her designee shall schedule a public hearing on an operating license or notice of intent to deny at a location convenient to the nearest population center to the proposed facility.

(6) A tape recording or written transcript of the hearing shall be made available to the public.

R 299.9515 Revisions based on public comment; response to comments.

Rule 515. (1) Upon completion of the public participation process for an operating license application, the director shall review all comments made during that process and make a final decision on the issuance of the license under the provisions of act 306.

(2) At the time that any operating license is issued, the director shall issue a response to comments which does both of the following:

(a) Briefly describes and responds to all significant comments on the draft license raised during the public comment period or during any hearing.

(b) Specifies which provisions, if any, of the draft operating license have been changed in the final license and the reason for the change.

(3) The director shall make the response to comments prepared under subrule (2) of this rule available to the public.

R 299.9516 Operating licenses; duration and effect.

Rule 516. (1) An operating license for a new facility or the expansion, enlargement, or alteration of an existing facility is valid for 3 years from the date of issuance. The license remains valid for a period of not more than 10 years if construction is initiated within the 3-year period and proceeds in a continuous manner.

(2) Extensions of an operating license for a new facility or the expansion, enlargement, or alteration of an existing facility may be granted by the director if unexpected construction delays occur beyond the control of the licensee.

(3) An operating license for an existing facility shall be effective for a fixed term of not more than

10 years. Each operating license for an existing land disposal facility shall be reviewed by the director 5 years after the date of license issuance or reissuance and shall be modified as necessary in accordance with the provisions of R 299.9519 and R 299.9520. The term of an operating license for an existing facility shall not be extended by modification beyond the maximum duration specified in this subrule.

(4) The director may issue any operating license for an existing facility for a duration that is less than the full allowable term under this rule.

(5) An operating license may be modified or revoked during its term for cause as set forth in R 299.9519.

(6) The issuance of an operating license does not relieve the owner or operator of his or her duty to comply with the statutory or regulatory requirements applicable to the facility that were enacted or promulgated after the license was issued.

(7) The issuance of an operating license does not convey any property rights of any sort or any exclusive privilege.

(8) The issuance of an operating license does not authorize any injury to persons or property or invasion of other private rights or any infringement of other state or local law or regulations, except as otherwise specified in sections 23(5) and 25(5) of part 111 of the act.

R 299.9517 Operating license for new facilities or the expansion, enlargement, or alteration of existing facilities; denial.

Rule 517. (1) The director shall deny an application for an operating license for a new facility or the expansion, enlargement, or alteration of an existing facility if the proposed treatment, storage, or disposal facility would violate part 111 of the act or these rules.

(2) The applicant is on notice that the director shall deny the operating license for a new facility or the expansion, enlargement, or alteration of an existing facility in either of the following situations:

(a) The applicant has not submitted the appropriate permit fee.

(b) The applicant has not submitted sufficiently detailed or accurate information to enable the director to make reasonable judgments as to whether the facility could comply with part 111 of the act and these rules.

(3) The director shall notify the applicant, in writing, of reasons for denial.

R 299.9518 Operating license for existing facilities; denial.

Rule 518. (1) The director shall deny an application for an operating license for an existing facility if the operation of the treatment, storage, or disposal facility for which the license is sought will violate part 111 of the act or these rules.

(2) The applicant is on notice that, in addition to any other of these rules, the director shall deny an operating license application for an existing facility if any of the following occur:

(a) Notwithstanding the receipt of the certification of construction required by sections 23(2) and 25(9) of part 111 of the act, the facility has not been constructed according to the plans approved by the director, the requirements of part 111 of the act or these rules, or the stipulations and conditions of the approved operating license for an existing facility.

(b) The existing construction or operation of an existing facility or facility newly subjected to the licensing requirements of part 111 of the act and these rules presents a hazard to the public health or the environment.

(c) The applicant has not submitted sufficiently detailed or accurate information to enable the director to make reasonable judgments as to whether the license should be granted.

(3) The criteria specified for license revocation pursuant to the provisions of R 299.9519 are causes for denial of an operating license renewal application.

(4) When an application is denied, the applicant shall be notified, in writing, of the reasons for denial.

(5) If an initial operating license application is denied, the applicant shall cease all hazardous waste treatment, storage, limited storage, and disposal activities at the facility for which the application was submitted and perform closure in accordance with R 299.9613 for all hazardous waste treatment, storage, limited storage, and disposal units at the facility for which the application was submitted. Upon denial of an initial operating license application, the applicant may seek judicial review pursuant to the provisions of section 631 of act 236. Initial operating license applications shall include those applications for facilities for which interim status has been obtained pursuant to the provisions of 40 C.F.R. §270.70.

(6) If a renewal operating license application is denied, the applicant shall cease all hazardous waste treatment, storage, limited storage, and disposal activities at the facility for which the application was submitted and perform closure in accordance with R 299.9613 for all hazardous waste treatment, storage, limited storage, and disposal units at the facility for which the application was submitted, unless the applicant appeals the denial and initiates proceedings pursuant to the applicable provisions of act 236 or 306. If the applicant initiates proceedings pursuant to the applicable provisions of act 236 or 306 and the denial is upheld pursuant to such proceedings, the applicant shall cease all hazardous waste treatment, storage, limited storage, and disposal activities at the facility for which the application was submitted and perform closure in accordance with R 299.9613 for all hazardous waste treatment, storage, limited storage, and disposal units at the facility for which the application was submitted.

R 299.9519 Modification, revocation, and suspension of operating licenses during their terms.

Rule 519. (1) An owner or operator shall construct, operate, and maintain a facility pursuant to part 111 of the act, MCL 324.11101 to 324.11153, these rules, and the operating license issued to the facility pursuant to part 111 of the act, MCL 324.11101 to 324.11153. Any deviation from the conditions of a license or from approved plans requires prior approval by the director, unless otherwise specified in this rule, and, if necessary, modification of the license.

(2) If the director receives any information during the term of an operating license, for example, inspects the facility, receives information submitted by the licensee as required in the license, receives a request for modification or revocation pursuant to this rule, or conducts a review of the license file, then he or she may determine if 1 or more of the causes listed in subrule (3) of this rule for modification or subrule (11) of this rule for revocation, or both, exist. If cause exists, the director may commence proceedings pursuant to act 306 to modify or revoke an operating license accordingly, subject to the limitation of subrule (4) of this rule, and may request an updated application under R 299.9520, if necessary. If an operating license is modified, then only the conditions subject to modification are reopened. If an operating license modification satisfies the criteria of subrule (5) of this rule for a minor modification, or if the director has not yet been authorized under 40 CFR part 271, then the license may be modified pursuant to subrule (6) of this rule. Otherwise, a draft license must be prepared and other procedures specified in R 299.9511 followed.

(3) Any of the following are causes for modification of an operating license:

(a) The causes listed under 40 CFR 270.41(a), except 40 CFR 270.41(a)(3).

(b) If the standards or regulations on which license was based have been changed by statute, through promulgation of new or amended standards or regulations, or by judicial decision after the license was issued.

(c) To modify a monitoring program under R 299.9611 or R 299.9612.

(d) Cause exists for modification under subrule (5) of this rule and the director determines that

modification is appropriate.

(e) The director has received notification pursuant to R 299.9522 of a proposed transfer of ownership or operation.

(4) The director shall not consider suitability of the facility location at the time of operating license modification, suspension, or revocation, or when reviewing an operating license for a new facility or the expansion, enlargement, or alteration of an existing facility, unless new information or standards indicate that a threat to human health or the environment exists that was unknown at the time of license issuance. In addition, the director shall not modify an operating license for a new facility or the expansion, enlargement, or alteration of an existing facility beyond what is authorized in the license.

(5) The licensee may put into effect the following minor license modifications without following the procedures specified in R 299.9511, if the licensee complies with subrule (6) of this rule:

(a) Any of the following general license modifications:

(i) An administrative and information change.

(ii) A correction of a typographical error.

(iii) Equipment replacement or upgrading with functionally equivalent elements, for example pipes, valves, pumps, conveyors, or controls.

(iv) A change in the frequency of, or procedures for, monitoring, reporting, sampling, or maintenance activities to provide for more frequent monitoring, reporting, sampling, or maintenance.

(v) A change in the interim compliance dates in the schedule of compliance if the prior written approval of the director is obtained.

(vi) A change in the expiration date of the license to allow earlier license termination if the prior written approval of the director is obtained.

(vii) A change in the ownership or operational control of a facility if the procedures specified in R 299.9522 are followed and if the prior written approval of the director is obtained.

(viii) Changes to remove operating license conditions that are no longer applicable because the standards upon which they are based are no longer applicable to the facility if prior written approval from the director is obtained.

(ix) Changes to remove license conditions applicable to a unit excluded under R 299.9204.

(x) Changes in the expiration date of a license issued to a facility at which all units are excluded under R 299.9204.

(b) Any of the following general facility modifications:

(i) A change to waste sampling or analysis methods to conform to agency guidelines or regulations.

(ii) A change to waste sampling or analysis methods to incorporate change associated with F039 (multisource leachate) sampling or analysis methods.

(iii) A change to waste sampling or analysis methods to incorporate changes associated with underlying hazardous constituents in ignitable or corrosive wastes if the prior written approval of the director is obtained.

(iv) A change in a sampling or analysis procedure or monitoring schedule if the prior written approval of the director is obtained.

(v) A change to analytical quality assurance/control plans to conform to department guidelines or rules.

(vi) A change in procedures for maintaining the operating record.

(vii) A change in the contingency plan to reflect the replacement of emergency equipment with functionally equivalent equipment, the upgrade of emergency equipment, or the relocation of emergency equipment listed.

(viii) A change to the training plan, other than those changes that affect the type of, or decrease the amount of, training given to employees.

(ix) The replacement of emergency equipment with functionally equivalent emergency equipment, the upgrade of emergency equipment, or the relocation of emergency equipment listed in the contingency plan.

(x) A change in the name, address, or phone number of a coordinator or another person or agency identified in the contingency plan.

(xi) A change in the procedures used to empty hazardous waste from transport vehicles and other containers.

(xii) A change that the construction quality assurance officer certifies will provide equivalent or better certainty that the unit components meet the design specifications. The certification must be provided in the facility operating record.

(c) Any of the following groundwater protection modifications:

(i) Replacement of an existing well that has been damaged or rendered inoperable without changing the location, design, or depth of the well.

(ii) A change in groundwater sampling or analysis procedure or monitoring schedule if the prior written approval of the director is obtained.

(iii) A change in statistical procedure for determining whether a statistically significant change in groundwater quality between upgradient and downgradient wells has occurred if the prior written approval of the director is obtained.

(d) Any of the following changes to closure plans:

(i) A change in the estimate of maximum inventory of waste on site at any time during the active life of the facility, not to exceed the approved process design capacity of the facility if the prior written approval of the director is obtained.

(ii) A change in the closure schedule for any unit, a change in the final closure schedule for the facility, or extension of the closure period if the prior written approval of the director is obtained.

(iii) A change in the expected year of final closure, if other license conditions are not changed and if the prior written approval of the director is obtained.

(iv) A change in procedure for the decontamination of facility equipment or structures if the prior written approval of the director is obtained.

(v) The addition of temporary tanks used for neutralization, dewatering, phase separation, or other separation with the prior written approval of the director.

(e) Any of the following postclosure modifications:

(i) A change in the name, address, or phone number of the contact person in the postclosure plan.

(ii) A change in the expected year of final closure if other license conditions are not changed.

(f) The addition of a roof to a container unit without altering the containment system.

(g) The replacement of a tank with a tank that is in compliance with the same design standards, has the same capacity of the replaced tank, and is in compliance with the same conditions in the license.

(h) The replacement of a waste pile unit with another waste pile unit of the same design and capacity and that is in compliance with all the waste pile conditions in the license.

(i) Any of the following land treatment modifications:

(i) A decreased rate of waste application.

(ii) A change in any condition specified in the license for a land treatment unit to reflect the results of the land treatment demonstration if performance standards are met and if the prior written approval of the director is obtained.

(iii) A change 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, if the conditions for the second demonstration are substantially the same as the conditions for the first demonstration and if the prior written approval of the director is obtained.

(j) Any of the following incinerator, boiler, or industrial furnace modifications:

(i) Authorization of up to an additional 720 hours of waste burning during the shakedown period for determining operation readiness after construction if the prior written approval of the director is obtained.

(ii) A change in the operating requirements specified in the license for conducting a trial burn, if the change is minor and if the prior written approval of the director is obtained.

(iii) A change in the ranges of the operating requirements specified in the license to reflect the results of the trial burn, if the change is minor and if the prior written approval of the director is obtained.

(iv) Substitution of an alternate type of nonhazardous waste fuel that is not specified in the license if the prior written approval of the director is obtained.

(v) Technology changes necessary to meet the standards under 40 CFR part 63, subpart EEE, if the owner or operator met the notification of intent to comply requirements of 40 CFR 63.1210 that were in effect before October 11, 2000, and if prior written approval is obtained from the director.

(k) Technology changes necessary to meet the standards under 40 CFR part 63, subpart EEE that were promulgated on October 12, 2005, if the owner or operator met the notification of intent to comply requirements of 40 CFR 63.1210(b) and 63.1212(a) and if prior written approval is obtained from the director.

(l) Waiver of operating and emission limits as necessary to support the transition to 40 CFR part 63, subpart EEE, if all of the following requirements are met and if prior written approval is obtained from the director:

(i) The specific operating and emission limits for which the waiver is requested must be identified in writing.

(ii) An explanation of why the changes are necessary to minimize or eliminate conflicts between the license and the maximum achievable control technology standards compliance must be provided in writing.

(iii) An explanation of how the rised provisions will be sufficiently protective must be provided in writing.

(iv) If the modification is being requested in conjunction with maximum achievable control technology performance testing where the license 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, the request must be provided at the same time the test plans are submitted to the director. The director may approve or deny the request contingent upon approval of the test plans.

(m) Any of the following burden reduction changes:

(i) The development of 1 contingency plan based on integrated contingency plan guidance pursuant to 40 CFR 264.52(b).

(ii) Changes to recordkeeping or reporting requirements under 40 CFR 264.56(i), 264.113(e)(5), 264.196(f), 264.343(a)(2), 264.1061(b)(1), 264.1062(a), or R 299.9629(10).

(iii) Changes to the inspection frequency for tank systems under 40 CFR 264.195(b).

(iv) Changes to a detection or a compliance monitoring program under 40 CFR 264.98(d) or (g)(2) or (3), or 264.99(f) or (g).

(6) For minor license modifications, the licensee shall do both of the following:

(a) Notify the director concerning the minor modification by certified mail or other means that establish proof of delivery. For minor modifications that do not require the prior written approval of the director, the notification must be made within 7 calendar days after the change is put into effect. For minor modifications that do require the prior written approval of the director, the notification shall be made before the change is put into effect. The notification must comply with all of the following provisions:

(i) Contain a minor modification request for the director's approval, if required.

(ii) Specify the exact change or changes being made or to be made to the license conditions or supporting documents referenced by the license.

(iii) Identify that the modification is a minor modification.

(iv) Explain why the modification is necessary.

(v) Provide the applicable information required pursuant to R 299.9504 and R 299.9508, as appropriate.

(b) Send a notice of the minor modification to all persons on the facility mailing list that is maintained by the director pursuant to 40 CFR 124.10(c)(ix) and the appropriate units of state and local government pursuant to 40 CFR 124.10(c)(x). The notification must be made within 90 days after the change is put into effect. For minor modifications that require the prior written approval of the director, the notification must made within 90 calendar days after the director approves the minor modification request.

(7) Any person may request that the director review any minor-license modification. The director may reject for cause. The director shall inform the licensee by certified mail that a minor license modification has been rejected and explain the reasons for the rejection. If a minor license modification is rejected, the licensee shall comply with the existing license conditions.

(8) For minor license modifications, the licensee may elect to follow the procedures specified in R 299.9511 instead of the license modification procedures. The licensee shall inform the director of this decision in the notice that is required in subrule (6) of this rule.

(9) Any modification that is not specifically listed in subrule (5) of this rule is considered a major license modification and is subject to the requirements of R 299.9511 and R 299.9520, unless all of the following conditions are met:

(a) The licensee demonstrates, to the director's satisfaction, that a modification meets the criteria for a minor modification. In determining the appropriate classification for a modification, the director shall consider the similarity of the modification to other modifications listed in subrule (5) of this rule. Minor modifications apply to minor changes that keep the license current with routine changes to the facility or its operation. These changes do not substantially alter the license conditions or reduce the capacity of the facility to protect human health or the environment.

(b) The modification does not authorize the physical construction of a new treatment, storage, or disposal facility; the expansion or enlargement beyond the previously authorized design capacity or area of a treatment, storage, or disposal facility; or the alteration of the method of treatment or disposal previously authorized at a treatment, storage, or disposal facility to a different method of treatment or disposal.

(c) The classification of the modification is not less stringent than that allowed under RCRA.

(10) For major license modifications, the licensee shall submit a major modification request to the director by certified mail or by other means that establish proof of delivery. The request must be made before the change is put into effect. The request must comply with all of the following provisions:

(a) Describe the exact change or changes to be made to the license conditions or supporting documents referenced by the license.

(b) Identify that the modification is a major modification.

(c) Explain why the modification is necessary.

(d) Provide the applicable information required under R 299.9504 and R 299.9508, as appropriate.

(11) An operating license may be revoked for any of the following reasons:

(a) Noncompliance by the licensee with part 111 of the act, MCL 324.11101 to 324.11153, these rules, or any condition of the operating license.

(b) A determination that the licensed activity endangers human health or the environment.

(c) The owner or operator fails in the application or during the operating license issuance process to

disclose fully all relevant facts or at any time misrepresents any relevant facts.

(12) Requests for operating license modification by a licensee and updated applications requested by the director pursuant to subrule (2) of this rule must be made on forms provided by the director.

(13) An operating license may be suspended pursuant to act 306.

(14) 40 CFR part 63, subpart EEE and 264.52(b), 264.56(i), 264.98(d) and (g)(2) and (3), 264.99(f) and (g), 264.113(e)(5), 264.195(b), 264.196(f), 264.343(a)(2), 264.1061(b)(1), 264.1062(a), 270.41(a), except 40 CFR 270.41(a)(3), are adopted by reference in R 299.11003.

R 299.9520 Procedures for modification or revocation of operating licenses.

Rule 520. (1) Any interested person, including the licensee, may request the director to commence proceedings under act 306 to modify, suspend, or revoke an operating license. All requests shall be in writing and shall contain facts or reasons supporting the request. If the director decides the request is not justified, he or she shall send the requestor a written response giving a reason for the decision.

(2) If the director decides to commence proceedings under act 306 to modify an operating license under R 299.9519(2), he or she shall prepare a draft operating license incorporating the proposed changes. The director may request submission of an updated license application. During any modification proceeding, the licensee shall comply with all conditions of the existing license until the license is modified.

(3) If the director decides to commence proceedings under act 306 to revoke an operating license under this rule, he or she shall issue a notice of intent to revoke and, when authorized under title II of the solid waste disposal act, follow those public participation procedures specified in R 299.9511.

(4) If an operating license is revoked, the director shall order the owner or operator to carry out closure procedures under section 51 of part 111 of the act and shall require the cessation of all activities at the facility subject to licensure under part 111 of the act, except those necessary for closure.

R 299.9521 Operating license conditions.

Rule 521. (1) All operating licenses shall contain all of the following general conditions:

(a) The general conditions contained in the provisions of 40 C.F.R. §270.30, except §270.30(l)(1) and (8). For purposes of these conditions the word "licensee" shall replace the word "permittee" and the term "part 111 of the act" shall replace the term "RCRA."

(b) The following additional conditions:

(i) The licensee shall not initiate an enlargement, alteration, or expansion beyond the previously authorized design capacity or area of a treatment, storage, or disposal facility without first obtaining an operating license for the expansion, enlargement, or alteration of an existing facility from the director.

(ii) For a facility being modified, the licensee shall not treat, store, or dispose of hazardous waste in the modified portion of the facility until 1 of the following conditions is met:

(A) The licensee has submitted, to the director, by certified mail or hand delivery, a letter signed by the licensee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the license and approved plans, and the director has inspected the modified facility and finds it is in compliance with the conditions of the license.

(B) Within 15 days of the date of submission of the letter in subparagraph (A) of this paragraph, the licensee has not received notice from the director of his or her intent to inspect, prior inspection is waived, and the licensee may commence treatment, storage, or disposal of hazardous waste.

(iii) The licensee shall obtain the approval of the director by a modification to the license before transferring ownership or operation of the facility to another person. The new owner or operator shall not accept hazardous waste at the facility until the license modification has been issued by the

director.

(c) Other conditions determined to be necessary by the director to clarify procedures for license issuance, reissuance, modification, and revocation under act 306.

(2) In addition to conditions required in all licenses, the director shall establish conditions on a case-by-case basis for all of the following:

(a) Compliance schedules, if applicable, consistent with the provisions of 40 C.F.R. §270.33.

(b) Requirements for recording and reporting monitoring results, as specified in the provisions of 40 C.F.R. §270.31 and part 6 of these rules.

(c) Duration of the license under R 299.9516.

(d) Allowable waste types.

(3) Each operating license under part 111 of the act shall include conditions necessary to do the following:

(a) Achieve compliance with part 111 of the act and these rules, including each of the applicable requirements of parts 6 and 8 of these rules. In satisfying this provision, the director shall incorporate applicable requirements of part 6 directly into the license or establish other conditions that are based on these requirements. For the purpose of this paragraph, an applicable requirement is a statutory or regulatory requirement which takes effect before final administrative disposition of a license or any requirement which takes effect before the modification of a-license under R 299.9519.

(b) Protect human health and the environment.

(c) If, as a result of an assessment or other information, the director determines that conditions are necessary in addition to those required under 40 C.F.R. part 63, subpart EEE, or the the applicable requirements of parts 6 and 8 of these rules to ensure protection of human health and the environment, the director shall include those terms and conditions in the operating license for a hazardous waste combustion unit.

(4) New, reissued, and, to the extent allowed under R 299.9519, licenses shall incorporate each of the applicable requirements referenced in this rule.

(5) A condition of an operating license 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 license.

(6) The provisions of 40 C.F.R. part 63, subpart EEE, §270.30, except §270.30(l)(1) and (8), §270.31, and §270.33 are adopted by reference in R 299.11003.

R 299.9522 Transfer of ownership or operation.

Rule 522. (1) A license may be transferred by the licensee to a new owner or operator only if the license has been modified pursuant to the provisions of R 299.9519(3) or a minor modification made pursuant to the provisions of R 299.9519(5) to identify the new licensee and incorporate such other requirements as may be necessary pursuant to the provisions of part 111 of the act and these rules.

(2) Changes in the ownership or operational control of a facility which is authorized to operate pursuant to the provisions of part 111 of the act or these rules but which has not been issued an operating license pursuant to the provisions of part 111 of the act or these rules may be made if the new owner or operator submits a revised part a permit application not later than 90 days before the scheduled change. When a transfer of ownership or operational control of a facility occurs, the old owner or operator shall comply with the financial requirements of part 7 of these rules until the new owner or operator has demonstrated to the director that he or she is complying with the requirements of part 7 of these rules. The new owner or operator shall demonstrate compliance with the provisions of part 7 of these rules within 6 months of the date of the change in the ownership or operational control of the facility. Upon the new owner or operator demonstrating, to the director, compliance with the provisions of part 7 of these rules, the director, or his or her designee, shall notify the old

owner or operator, in writing, that he or she no longer needs to comply with these requirements as of the date of the demonstration. All other interim status duties are transferred effective immediately upon the date of the change of ownership or operational control of the facility.

(3) The new owner or operator shall comply with all of the requirements of part 111 of the act and these rules and with the stipulations of previous operating licenses or other agreements entered into by the previous owner or operator and the director.

(4) The responsibility for remedial measures to correct any environmental problem resulting from previous operations at the facility shall be assumed by the new owner or operator. This requirement shall be incorporated into the operating license for the new owner or operator.

R 299.9523 Operating license fee schedule; new, expanded, enlarged, or altered facilities.

Rule 523. Table 501 reads as follows:

Table 501
Fee Schedule

Type of facility being constructed, expanded, enlarged, or altered:

Landfill, surface impoundment, land treatment, or waste pile	$ 9,000.00
Incinerator or other treatment than described above	$ 7,200.00
Storage, other than storage associated with treatment or disposal activities which may be regulated under a single license.	$ 500.00

R 299.9524 Remedial action plans.

Rule 524. (1) The requirements of this rule apply to remedial action plans and owners or operators seeking remedial action plans to authorize the treatment, storage, or disposal of hazardous remediation waste at a remediation waste management site.

(2) A remedial action plan shall only be issued for the area of contamination where the remediation wastes to be managed under the plan originated, or areas in close proximity to the contaminated area, except as allowed in limited circumstances under 40 C.F.R. §270.230.

(3) The requirements of part 5 of these rules do not apply to remedial action plans, with the exception of R 299.9516, unless otherwise specified in this rule.

(4) Notwithstanding any other provision of part 5 of these rules or this rule, any document that meets the requirements of this rule, constitutes an operating license under part 111 of the act.

(5) A remedial action plan may include either of the following:

(a) A stand-alone document that includes only the information and conditions required in this rule.

(b) A part or parts of another document that includes information or conditions for other activities at the remediation waste management site, in addition to the information and conditions required by this rule.

(6) The treatment, storage, or disposal of hazardous remediation wastes under a remedial action plan as part of a cleanup compelled by federal or state cleanup authorities does not affect obligations that exist under such authorities in any way.

(7) The issuance of a remedial action plan to the owner or operator of a facility operating under interim status does not terminate the interim status of the facility.

(8) Treatment units that involve the combustion of hazardous remediation wastes at remediation waste management sites are not eligible for remedial action plans under this rule.

(9) An owner or operator of a facility already licensed under these rules may obtain approval of a remedial action plan for managing hazardous remediation waste at the facility by modifying the existing license in accordance with the requirements of R 299.9519 and R 299.9520, except the requirements of R 299.9519(6)(a)(v) and (10)(d), thereby making the remedial action plan part of the license. Requests to modify the license shall include the information specified in 40 C.F.R. §270.110. Once incorporated into the license, the remedial action plan is subject to the requirements for license modification, revocation, reissuance, termination, and duration and effect provisions of part 5 of these rules.

(10) Owners or operators seeking a remedial action plan and owners or operators with existing remedial action plans shall comply with the requirements of this rule and 40 C.F.R. part 270, subpart H, except §§270.80, 270.85, 270.90, 270.155, 270.160, 270.190, and 270.195.

(11) Final decisions on remedial action plan applications and remedial action plans shall be subject to the appeal processes for operating licenses which are established under the act and act 306.

(12) A remedial action plan shall become effective 30 days after the director notifies the owner or operator and all persons which provided comments on the draft plan that the plan is approved, except under any of the following conditions:

(a) The director specifies a later effective date as part of the final decision.

(b) The owner or operator or another person has appealed the remedial action plan.

(c) No persons requested a change in the draft remedial action plan, in which case the plan becomes effective immediately when it is issued.

(13) Remedial action plans shall be issued for a fixed term, not to exceed 10 years, although the plans may be renewed upon approval by the director in fixed increments of not more than 10 years. Each remedial action plan for hazardous waste land disposal shall be reviewed by the director 5 years after the date of issuance or reissuance and shall be modified as necessary to ensure that the owner or operator is in compliance with the requirements of part 111 of the act and these rules.

(14) The provisions of 40 C.F.R. part 270, subpart H, except §§270.80, 270.85, 270.90, 270.155, 270.160, 270.190, and 270.195 are adopted by reference in R 299.11003. For the purposes of this adoption the words “part 5 of these rules” shall replace the words "§§270.3 through 270.66," the words "parts 6 and 8 of these rules" shall replace the words "part 264 and 266," the words "this act and act 306" shall replace the words "§270.155," the words "R 299.9519 and R 299.9520" shall replace the words "§§270.40 through 270.43," "§§270.41 and 270.43," and "§270.43," The words “these rules” shall replace the words "parts 124, 260 through 266 and 270 of this chapter," the words "part 7 of these rules" shall replace the words "part 264, subpart H, of this chapter," the word "R 299.9511" shall replace the words "§§124.31, 124.32, and 124.33 of this chapter," and the word "R 299.9629" shall replace the word "§264.101."

R 299.9525 Notice requirements.

Rule 525. (1) An owner of a hazardous waste treatment, storage, or disposal facility shall execute and file a notice with the office of the register of deeds in the county in which the facility is located. The owner shall submit verification of the execution, filing, and recording of the notice to the department within 60 days of the effective date of this rule. The notice shall be titled “notice regarding statutory obligations applicable to property” and shall comply with all of the following requirements:

(a) The notice shall include a legal description of the land upon which the facility is located. The land and the facility shall be referred to as "the property."

(b) The notice shall state that the property has been used to manage hazardous waste and is subject to the corrective action requirements of part 111 of the act and RCRA, as amended by the 1984 hazardous and solid waste amendments.

(c) The form of the notice shall comply with the requirements of section 1 of 1937 PA 103, as amended, being MCL 565.201 et seq.

(2) Owners or operators shall provide new owners or operators with a copy of the notice required pursuant to the provisions of subrule (1) of this rule.

(3) New owners or operators shall provide notice to the director of the transfer of ownership or operational control of a facility. The notification shall be provided to the director within 90 days before the scheduled change in ownership or operational control.

(4) The requirements of subrules (1) to (3) of this rule apply to both of the following:

(a) Owners or operators of hazardous waste treatment, storage, or disposal facilities which have been issued an operating license under part 111 of the act.

(b) Owners or operators of hazardous waste treatment, storage, or disposal facilities which have not yet been issued an operating license under part 111 of the act.

PART 6. OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

R 299.9601 Applicability; relationship to interim status standards.

Rule 601. (1) The standards in this part apply to owners and operators of all facilities that treat, store, or dispose of hazardous waste, except as otherwise specifically provided in these rules.

(2) Treatment, storage, or disposal facilities that are authorized to operate under these rules and that have not been issued or reissued an operating license after the effective date of these rules shall comply with all of the following rules:

(a) R 299.9602 Environmental and human health standards generally.
(b) R 299.9607 Contingency plan and emergency procedures.
(c) R 299.9609 Operating record; availability, retention and disposition of records.
(d) R 299.9610 Reporting.
(e) R 299.9613(2) to (6) Closure and postclosure.
(f) R 299.9614 Use and management of containers.
(g) R 299.9615 Tank systems.
(h) R 299.9623 Incinerators.
(i) R 299.9627 Land disposal restrictions.
(j) R 299.9629 Corrective action.
(k) R 299.9635 Corrective action management unit requirements.
(l) R 299.9636 Temporary unit requirements.
(m) R 299.9637 Hazardous waste munitions and explosives storage requirements.
(n) R 299.9638 Staging pile requirements.
(o) R 299.9639 Disposal of corrective action management unit-eligible waste in hazardous wastes landfills.

(3) In addition to the requirements specified in subrule (2) of this rule, the following persons shall comply with 40 CFR 260.4 and 260.5 and the interim status standards of 40 CFR part 265, except subparts D, H, I, J, O, and DD, and 40 CFR 265.70, 265.73 to 265.77, 265.112(d)(1), 265.115, and 265.120.

(a) An owner or operator of an existing facility that treats, stores, or disposes of hazardous waste who has fully complied with the requirements for interim status under section 3005(e) of RCRA, 42 USC 6925(e), and 40 CFR 270.10, until final administrative disposition of the owner's or operator's permit application pursuant to RCRA or until an operating license is issued or reissued to the owner or operator after the effective date of these rules.

(b) An owner or operator of a facility that is in existence on November 19, 1980, or that is in existence on the effective date of amendments to part 111 of the act, MCL 324.11101 to 324.11153, or these rules that render it subject to the licensing requirements of part 111 of the act, MCL 324.11101 to 324.11153, who has failed to provide timely notification as required by section 3010(a) of RCRA, 42 USC 6930(a), or failed to file part A of the permit application as required under 40 CFR 270.10(e) and (g).

(4) The requirements of this part apply to a person who disposes of hazardous waste by means of underground injection subject to a permit issued pursuant to an underground injection control program approved or promulgated under the federal safe drinking water act only to the extent that these requirements are included in R 299.9503(3)(a).

(5) The requirements of this part apply to the owner or operator of a publicly owned treatment works that treats, stores, or disposes of hazardous waste only to the extent that these requirements are included in R 299.9503(3)(b).

(6) The standards in this part do not apply to those persons who are listed in R 299.9503(1) and (2),

except as otherwise specified by those subrules.

(7) Except as noted in this subrule, part 6 of the rules does not apply to owners and operators of hazardous waste incinerator facilities identified in subrule (2) of this rule if the owner or operator demonstrates compliance with the maximum achievable control technology standards of 40 CFR part 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(b) that documents compliance with the requirements of 40 CFR part 63, subpart EEE. The maximum achievable control technology standards of 40 CFR part 63, subpart EEE do not supersede the requirements of R 299.9608 to R 299.9610 and part 7 of these rules, and 40 CFR part 265, subparts A to D, F, G, BB, and CC.

(8) Notwithstanding any other provisions of these rules, enforcement actions may be brought pursuant to section 11148 of the act, MCL 324.11148.

(9) 40 CFR 260.4, 260.5, and 270.10 and 40 CFR part 265, except subparts H, O, and DD, and 40 CFR 265.70, 265.73 to 265.77, 265.112(d)(1), 265.115, and 265.120, are adopted by reference in R 299.11003. Where 40 CFR parts 264, 265, and 270 are referenced in this part, the term "director" replaces the term "regional administrator" and the term "operating license" replaces the term "permit." For the purposes of adoption, the term "site identification number" replaces the term "EPA identification number," the term "R 299.9629" replaces the term "§264.101(a)," the term "part 5 of these rules" replaces the term "§270.1(c)(7)," and the term "R 299.9703(8) and R 299.9710(17)" replaces the term "§265.140(d)," and the term "R 299.9612 and R 299.9629"-replaces the term "§§264.91 through 264.100."

R 299.9602 Environmental and human health standards generally.

Rule 602. (1) All treatment, storage, and disposal facilities shall be located, designed, constructed, and operated in a manner that will prevent all of the following:

(a) Violations of the federal clean water act or part 31 of the act.

(b) Air emissions in violation of the federal clean air act or part 55 of the act.

(c) Degradation, as defined by part 31 of the act, of a sole-source aquifer.

(d) Exposure of humans or the environment to harmful quantities of hazardous waste or hazardous waste constituents.

(e) Pollution, impairment, or destruction of the natural resources of the state.

(2) The owner or operator of a treatment, storage, or disposal facility which discharges to surface water or groundwater, including discharges from leachate collection systems or surface water runoff collection systems, shall comply with the federal clean water act and part 31 of the act. Additionally, owners or operators of a treatment, storage, or disposal facility which discharges, other than sanitary sewage, to municipal sewerage systems shall meet the applicable pretreatment standards for these facilities.

R 299.9603 Location standards.

Rule 603. (1) Active portions of new treatment, storage, or disposal facilities or expansions, enlargements, or alterations of existing facilities shall not be located in any of the following areas:

(a) Within 61 meters of a fault which had its displacement in Holocene time.

(b) In a floodway designated by the department under part 31 of the act.

(c) In a coastal high-risk area designated under part 323 of the act.

(d) Over a sole-source aquifer or the recharge zone of a sole-source aquifer, unless the director grants an exemption to this provision based upon a demonstration by the applicant that the treatment, storage, or disposal facility will be located, designed, constructed, and operated in a manner that will prevent contamination of the aquifer.

(e) Within that isolation distance from public water supplies specified by act 399.

(f) In a wetland.

(2) Unless otherwise allowed by an operating license under part 111 of the act or subrule (3) of this rule, the following isolation distances shall be maintained between the active portion of a new facility and adjacent commercial, residential, or recreational property lines:

(a) For landfills, 150 meters.

(b) For other facilities, 60 meters.

(3) For purposes of subrule (2) of this rule, adjacent commercial, residential, and designated recreational property shall not include public roads, railroads, or rights-of-way. However, the director may require greater isolation distances than those specified in subrule (2) of this rule, or allow lesser isolation distances, based on the following criteria:

(a) The proposed design and operation of the facility.

(b) The location of private water wells.

(c) The potential for fugitive emissions in violation of part 55 of the act.

(4) Treatment, storage, and disposal facilities shall not be located in a floodplain. The director may grant an exemption to the floodplain restrictions of this rule for treatment and storage facilities if either of the following conditions is met:

(a) The facility is designed, constructed, operated, and maintained to prevent washout of any hazardous waste by a flood.

(b) The owner or operator can demonstrate to the director that procedures are in effect which will cause the waste to be removed safely, before floodwaters can reach the facility, to a location where the wastes will not be vulnerable to the floodwaters.

(5) Landfills, surface impoundments, and waste piles shall only be located in areas where there is not less than 6 meters of soil with a maximum permeability of 1.0×10^{-6} cm/sec at all points below and lateral to the liner or bottom of the landfill, surface impoundment, or waste pile, unless the owner or operator substitutes an engineered backup liner of equivalent design and demonstrates to the director that it provides equivalent environmental protection.

R 299.9604 Facility design and operating standards.

Rule 604. The owner or operator of a treatment, storage, or disposal facility shall design, construct, operate, and maintain all of the following:

(a) A run-on control system capable of preventing flow onto the active portions of the facility during peak discharge from at least a 24-hour, 25-year storm.

(b) A runoff management system to collect and control at least the water volume resulting from active portions of the facility from a 24-hour, 100-year storm.

(c) Systems to prevent hazardous waste or hazardous waste constituents from escaping into the soil, directly or indirectly into surface water or groundwaters, or uncontrolled into drains or sewers.

R 299.9605 General requirements for owners and operators.

Rule 605. (1) The owner or operator of a hazardous waste treatment, storage, or disposal facility shall comply with all of the requirements of 40 C.F.R. part 264, subpart B, except §264.15(b)(5), unless otherwise specified in this rule. The owner or operator shall also provide copies of the notices required pursuant to 40 C.F.R. §264.12(a) to the regional administrator. In addition to the notice requirements of 40 C.F.R. §264.12, the owner or operator shall, before transferring ownership or operation of a facility during its operating life or during any required postclosure care period, notify the new owner or operator, in writing, of the requirements of this part and part 5 of these rules.

(2) Hazardous waste transport vehicles and other containers leaving a designated facility shall be empty of hazardous waste in accordance with the provisions of R 299.9207 or accompanied by a manifest that is prepared in accordance with the provisions of these rules. The owner or operator

shall develop and implement a procedure for ensuring compliance with this subrule. If a transport vehicle or other container is not empty, then the owner or operator shall either take all steps required in the procedure to ensure that the provisions of R 299.9207 are complied with or ensure that the hazardous waste that remains in the vehicle or containers is accompanied by a manifest that is prepared in accordance with the provisions of these rules when leaving the designated facility.

(3) The requirements of 40 C.F.R. part 264, subpart B do not apply to remediation waste management sites, other than those sites which are located at facilities that are subject to the licensing requirements under part 111 of the act and these rules because the facility is also treating, storing, or disposing of hazardous wastes that are not remediation wastes, provided that the owners or operators of the remediation waste management sites comply with the requirements of 40 C.F.R. §264.1(j)(1) to (13).

(4) The provisions of 40 C.F.R. part 264, subpart B, except §264.15(b)(5), and §264.1(j)(1) to (13) are adopted by reference in R 299.11003. For the purposes of this adoption, the words "regional administrator" shall be replaced by the word "director" and the word "§264.101" shall be replaced by the word "R 299.9629."

R 299.9606 Preparedness and prevention.

Rule 606. (1) Owners or operators of hazardous waste treatment, storage, and disposal facilities shall comply with the provisions of 40 C.F.R. part 264, subpart C, regarding preparedness and prevention unless otherwise specified in this rule.

(2) The requirements of 40 C.F.R. part 264, subpart C do not apply to remediation waste management sites, other than those sites which are located at facilities that are subject to the permitting or licensing requirements under part 111 of the act and these rules because the facility is also treating, storing, or disposing of hazardous wastes that are not remediation wastes, provided that the owners or operators of the remediation waste management sites comply with the requirements of 40 C.F.R. §264.1(j)(1) to (13).

(3) The provisions of 40 C.F.R. part 264, subpart C, and §264.1(j)(1) to (13) are adopted by reference in R 299.11003. For the purposes of this adoption, the word "§264.101" shall be replaced by the word "R 299.9629."

R 299.9607 Contingency plan and emergency procedures.

Rule 607. (1) Owners or operators of hazardous waste treatment, storage, and disposal facilities shall maintain a contingency plan for the facility and comply with 40 C.F.R. part 264, subpart D, regarding the plan and emergency procedures, unless otherwise specified in this rule.

(2) If there is a fire, explosion, or other release of hazardous waste or hazardous waste constituents that could threaten human health or the environment, or if the owner or operator has knowledge that a spill has reached surface water or groundwater, then the owner or operator shall immediately notify the department's pollution emergency alerting system - telephone number 800-292-4706. The notification shall include all of the following information:

(a) The name and telephone number of the person who is reporting the incident.

(b) The name, address, telephone number, and site identification number of the facility.

(c) The name, address, and telephone number of the owner or operator.

(d) The date, time, and type of incident.

(e) The name and quantity of the material or materials involved and released.

(f) The extent of injuries, if any.

(g) The estimated quantity and disposition of recovered material that resulted from the incident, if any.

(h) An assessment of actual or potential hazards to human health or the environment.

(i) The immediate response action taken.

(3) The requirements of 40 C.F.R. part 264, subpart D do not apply to remediation waste management sites, other than those sites which are located at facilities that are subject to the licensing requirements under part 111 of the act and these rules because the facility is also treating, storing, or disposing of hazardous wastes that are not remediation wastes, provided that the owners or operators of the remediation waste management sites comply with 40 C.F.R. §264.1(j)(1) to (13).

(4) The provisions of 40 C.F.R. part 264, subpart D, and §264.1(j)(1) to (13) are adopted by reference in R 299.11003. For the purposes of the adoption by reference of 40 C.F.R. §264.52(b), the words "operating license" shall replace the words "RCRA permit." For the purposes of the adoption of 40 C.F.R. §264.56(i) and §264.1(j)(1) to (13), the word "director" shall replace the words "regional administrator" and the word "R 299.9629" shall replace the word "§264.101," respectively.

R 299.9608 Use of manifest system.

Rule 608. (1) If a facility receives hazardous waste accompanied by a manifest, then the owner or operator, or his or her agent, shall comply with 40 CFR 264.71(a).

(2) If a facility receives a bulk shipment of hazardous waste from a rail or water transporter that is accompanied by a shipping paper containing all the information required on the manifest, excluding the site identification numbers, generator's certification, and signatures, then the owner or operator, or the owner or operator's agent, shall comply with 40 CFR 264.71(b) and return a legible copy of the manifest to the director or his or her designee within a period of 10 days after the end of the month in which the waste was received. If the generator state and the destination state are the same, the owner or operator, or his or her agent, shall only submit 1 copy of the manifest to the director or his or her designee.

(3) If a shipment of hazardous waste is initiated from a facility, then the owner or operator of that facility shall comply with the requirements of part 3 of these rules.

(4) Within 3 working days of the receipt of a shipment subject to R 299.9314, the owner or operator shall provide a copy of the movement document bearing all required signatures to the exporter, to competent authorities of the countries of export and transit that control the shipment as an export and transit of hazardous waste, respectively, and to the EPA electronically using WIETS, or its successor system. The owner or operator shall maintain the original copy of the movement document at the facility for not less than 3 years from the date of signature. The owner or operator may satisfy this recordkeeping requirement by retaining electronically submitted documents in the facility's account on WIETS or its successor program, if copies are readily available for viewing and production if requested by the EPA or authorized state inspector. The owner or operator may not be held liable for the inability to produce the documents for inspection under this subrule if the inability to produce the document is due exclusively to technical difficulty with WIETS, or its successor system, for which the owner or operator bears no responsibility.

(5) The owner or operator shall determine if the consignment state for a shipment regulates any additional wastes, beyond those regulated federally, as hazardous wastes under its state hazardous waste program. The owner or operator shall also determine if the consignment state or the generator state requires the owner or operator to submit any copies of the manifests to these states.

(6) Electronic manifests that are obtained, completed, and transmitted in accordance with 40 CFR 262.20(a)(3) and used in accordance with this rule instead of paper manifests are the legal equivalent of paper manifests bearing handwritten signatures, and satisfy any requirement in these rules to obtain, complete, sign, provide, use, or retain a manifest as outlined in 40 CFR 264.71(f) and (k).

(7) An owner or operator may participate in the electronic manifest system either by accessing the system from the owner or operator's electronic equipment, or from portable equipment brought to the

facility by the transporter who delivers the hazardous waste shipment, and by complying with 40 CFR 264.71(i).

(8) If an owner or operator receives a hazardous waste shipment that is accompanied by a paper replacement manifest for a manifest that originated electronically, the owner or operator shall comply with 40 CFR 264.71(h).

(9) An owner or operator who is a user of the electronic manifest system format may be assessed a user fee by the EPA for the origination or processing of each electronic manifest. An owner or operator may also be assessed a user fee by the EPA for the collection and processing of paper manifest copies that owners or operators are required to submit in accordance with 40 CFR 264.71(a)(2)(v). The EPA shall establish, publish, maintain, and update the user fees in accordance with 40 CFR 264.71(j).

(10) Electronic manifest signatures must meet the criteria described in 40 CFR 262.25.

(11) After an owner or operator has certified to the receipt of a hazardous waste by signing Item 20 of the manifest, any post-receipt data corrections must be made in accordance with 40 CFR 264.71(l).

(12) Upon discovering a manifest discrepancy, as defined in 40 CFR 264.72(a), including a significant difference as defined in 40 CFR 264.72(b), the owner or operator shall comply with 40 CFR 264.72(c) to (g) and distribute copies of the manifest pursuant to subrules (1) and (2) of this rule.

(13) The requirements of this rule do not apply to owners or operators of off-site facilities with respect to waste military munitions exempted from manifesting requirements under R 299.9818.

(14) Owners and operators shall comply with the manifest and fee requirements for the electronic hazardous waste manifest program that are established and administered by the EPA in accordance with 40 CFR 260.4 and 260.5 and part 264, subpart FF.

(15) 40 CFR 260.4, 260.5, 264.71(a), (b), (f), and (h) to (l), and 264.72 are adopted by reference in R 299.11003. For the purposes of adoption, the term "site identification number" replaces the term "EPA identification number," the term "R 299.9207" replaces the term "§261.7(b)," and the term "R 299.9309(1)(a)" replaces the term "§262.20(a)."

R 299.9609 Operating record; availability, retention and disposition of records.

Rule 609. (1) An owner or operator shall keep a written operating record at his or her facility, or in an alternate location approved by the director or the director's designee. The following information shall be recorded as it becomes available and shall be maintained in the operating record until closure of the facility:

(a) The information required by the provisions of 40 C.F.R. §264.73(b)(1) to (4), (6), (8), (10), (18), and (19), and 40 C.F.R. part 264, appendix I.

(b) Any other records required to be kept in the operating record by an operating license.

(2) The information required by the provisions of 40 C.F.R. §264.73(b)(5), (7), (9), and (11) to (17) shall be recorded as it becomes available and shall be maintained in the operator record in accordance with the time periods specified therein.

(3) All records, including plans, required under this part shall be furnished upon request, and made available at all reasonable times for inspection, by any officer, employee, or representative of the department who is duly designated by the director.

(4) The retention period for all records required under this part is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the director or administrator.

(5) A copy of records of waste disposal locations and quantities under subrule (1) of this rule shall be submitted to the director, or his or her designee, the regional administrator, and local land authority upon closure of the facility.

(6) The provisions of 40 C.F.R. §264.73 and part 264, appendix I, are adopted by reference in R 299.11003.

R 299.9610 Reporting.

Rule 610. (1) The owner or operator shall provide to the director or the director's designee the data necessary for the department to prepare and submit Michigan's hazardous waste report as required to the EPA. The owner or operator shall submit the data in a format specified by the director or the director's designee. The data must be acquired from the information required in parts 3 and 6 of the rules, the operating reports required in subrule (3) of this rule, other reporting mechanisms used by the director to obtain the information specified in 40 CFR 264.75, and by the EPA as part of a federal information collection request published in conjunction with 40 CFR 264.75.

(2) 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 in 40 CFR 263.20(e), and if the waste is not excluded from the manifest requirement by R 299.9304, then the owner or operator shall prepare and submit a single copy of a report to the director or his or her designee which the within 15 days after receiving the waste. The unmanifested waste report must be submitted on a form approved by the director. The report must be designated "Unmanifested Waste Report" and must include all of the following information:

(a) The site identification number, name, and address of the facility.

(b) The date the facility received the waste.

(c) The site identification number, name, and address of the generator and the transporter, if available.

(d) A description and the quantity of each unmanifested hazardous waste and facility received.

(e) The method of treatment, storage, or disposal for each hazardous waste.

(f) The certification signed by the owner or operator of the facility or the owner or operator's authorized representative.

(g) A brief explanation of why the waste was unmanifested, if known.

(3) The owner or operator of a hazardous waste treatment or disposal facility on the site of generation shall submit an operating report to the director or his or her designee, on forms provided by the director, which summarizes all managed hazardous wastes treated or disposed of, including the hazardous waste number of the wastes, quantity, method of treatment or disposal, and dates of treatment or disposal. The report must be submitted to the director within 10 days after the end of March, June, September, and December of each year, unless more frequent submissions are required by the director or his or her designee.

(4) All reports must be signed and certified pursuant to 40 CFR 270.11, which is adopted by reference in R 299.11003.

(5) 40 CFR 263.20(3) is adopted by reference in R 299.11003.

R 299.9611 Environmental monitoring.

Rule 611. (1) An owner or operator of a hazardous waste treatment, storage, or disposal facility shall develop an environmental monitoring program that is capable of detecting a release of hazardous waste or hazardous waste constituents from the facility.

(2) An owner or operator shall do all of the following as part of the environmental monitoring program:

(a) Prepare a sampling and analysis plan for each environmental monitoring program that includes all of the following information:

(i) A sampling location map.

(ii) A sampling schedule.

(iii) The parameters to be analyzed.
(iv) The sampling equipment, well purging, and sample collection procedures.
(v) The field measured parameters.
(vi) The sampling preservation and handling techniques.
(vii) The sampling analytical protocols.
(viii) The field and laboratory quality assurance and quality control procedures.
(ix) The chain of custody procedures.
(x) The decontamination procedures.
(xi) The data analysis, including the statistical method used.
(b) Conduct a groundwater monitoring program that is in compliance with the requirements of R 299.9612, except as indicated in subrule (3) of this rule.
(c) Conduct an ambient air monitoring program approved by the director or his or her designee to detect violations of the provisions of part 55 of the act.
(d) Conduct an annual soil monitoring program in areas subject to spills, such as loading and unloading areas, to detect hazardous wastes or hazardous waste constituents.
(3) The director shall waive the groundwater monitoring requirements of R 299.9612 if either of the following conditions is met:
(a) The facility is not a land disposal facility and the owner or operator complies with 1 of the following provisions:
(i) All treatment, storage, and waste handling activities take place inside or under a structure that provides protection from precipitation and runoff and the facility is in compliance with the provisions of R 299.9604.
(ii) The owner or operator demonstrates, to the director's satisfaction, that monitoring is not required.
(iii) The owner or operator demonstrates, to the director's satisfaction, that a lesser degree of monitoring, or that alternate information regarding monitoring activities conducted in conjunction with response activity in the area of the hazardous waste management unit or units, can be utilized to demonstrate compliance with the provisions of part 111 of the act and these rules.
(b) The director finds that there is no potential for migration of liquid from the facility to the uppermost aquifer during the active life of the facility and the postclosure care period specified pursuant to the provisions of 40 C.F.R. §264.117, which is adopted by reference in R 299.11003. The demonstration shall be certified by a qualified geologist or geotechnical engineer. To provide an adequate margin of safety in the prediction of potential migration of liquid, the owner or operator shall base any predictions made pursuant to this subdivision on assumptions that maximize the rate of liquid migration.
(4) The director shall waive the requirements of subrule (2)(c) and (d) of this rule if the owner or operator demonstrates that monitoring is not required or that a lesser degree of monitoring can be utilized to demonstrate compliance with the provisions of part 111 of the act and these rules.
(5) The director shall require more intensive or extensive monitoring programs if needed to demonstrate compliance with the provisions of part 111 of the act or these rules.

R 299.9612 Groundwater monitoring.
Rule 612. (1) Owners or operators of facilities that treat, store, or dispose of hazardous waste shall comply with the requirements of R 299.9629 and 40 CFR part 264, subpart F, excluding 264.94(a)(2) and (3), 264.94(b) and (c), 264.100, and 264.101 and except as follows:
(a) The director may, in the facility operating license, extend the point of compliance into groundwaters other than the uppermost aquifer.
(b) In addition to wells required by 40 CFR part 264, subpart F, the owner or operator shall install

wells at appropriate locations and depths to yield groundwater from any saturated zone other than the uppermost aquifer if the sampling will provide an earlier warning of failure from a hazardous waste management unit. All wells installed to monitor or evaluate groundwater must be constructed and abandoned in accordance with the well installation and well decommissioning procedures in ASTM standards D5092-04 and D5299-14, or a plan approved by the director.

(c) The director may require sampling and analysis for secondary monitoring parameters at frequencies specified in the facility operating license. If the owner or operator determines that there is a statistically significant increase in 1 or more secondary monitoring parameters, then he or she shall do all of the following:

(i) Notify the director or his or her designee of the finding immediately.

(ii) Conduct verification sampling for both primary and secondary monitoring parameters, taking replicate measurements on each sample at each well in accordance with a plan approved by the director.

(iii) Redetermine if a statistically significant increase has occurred in either primary or secondary monitoring parameters and immediately notify the director or his or her designee of the results.

(d) The concentration limit of a hazardous constituent established under 40 CFR 264.94(a) must not exceed the background level of that constituent in groundwater, unless a concentration limit which is not less stringent than that allowed under RCRA has been established under part 31 or 201 of the act, MCL 324.3101 to 324.3134 and 324.20101 to 20142.

(e) To determine whether background values or concentration limits have been exceeded pursuant to 40 CFR 264.97(h), the owner or operator shall use a statistical test approved by the director in the facility operating license and shall determine if the difference between the mean of the constituent at each well, using all replicates taken, and either of the following is significant:

(i) The background value of the constituent as defined in the operating license.

(ii) The mean value of 1 year's initial sampling for the well itself where the 1-year period is specified by the director in the facility operating license.

(f) The director may require compliance monitoring and corrective action under 40 CFR 264.99, R 299.9629, part 31 of the act, MCL 324.3101 to 324.3134, and part 201 of the act, MCL 324.20101 to 324.20142, to be conducted under a consent agreement or other legally binding agreement rather than under an operating license.

(g) Nothing in 40 CFR part 264, subpart F, or this rule must restrict the director from taking action pursuant to section 11148 or 11151 of the act, MCL 324.11148 and 324.11151.

(h) The owner or operator has been granted a waiver by the director under R 299.9611(3).

(2) 40 CFR part 264, subpart F and 40 CFR part 264, appendix IX, excluding 264.94(a)(2) and (3), 264.94(b) and (c), 264.100, and 264.101, are adopted by reference in R 299.11003. For the purposes of adoption, the term "director" replaces the terms "regional administrator" or "administrator," the term "department" replaces the term "agency," the term "part 1 of these rules" replaces the-term "§270.1(c)(7)," the term "R 299.9612 and R 299.9629" replaces the term "§§264.91 through 264.100," and the term "operating license" replaces the term "permit."

R 299.9613 Closure and postclosure.

Rule 613. (1) The owner or operator of a hazardous waste treatment, storage, or disposal facility shall comply with the closure and postclosure provisions of 40 C.F.R. part 264, subpart G, except 40 C.F.R. §§264.112(d)(1), 264.115, and 264.120.

(2) The owner or operator shall notify the director, in writing, not less than 60 days before the date on which the owner or operator expects to begin partial or final closure of any or all hazardous waste management units at the treatment, storage, or disposal facility. A copy of the current or updated partial or final closure plan for the hazardous waste management unit or units that are being closed

shall accompany the notification.

(3) Within 60 days of completion of closure of each hazardous waste management unit at a facility, 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 an independent registered professional engineer and shall include all of the following supporting documentation:

(a) The results of all sampling and analysis.

(b) Sampling and analysis procedures.

(c) A map showing the location where samples were obtained.

(d) Any statistical evaluations of sampling data.

(e) A summary of waste types and quantities removed from the site and the destination of these wastes.

(f) If soil has been excavated, the final depth and elevation of the excavation and a description of the fill material used.

(4) Any documentation not listed in subrule (3) of this rule that supports the independent registered professional engineer's certification shall be furnished to the director upon request until the director releases the owner or operator from the financial assurance requirements for closure pursuant to the provisions of R 299.9703.

(5) Not later than 60 days after completion of the established postclosure care period for each hazardous waste disposal unit, the owner or operator shall submit, to the director, by registered mail, a certification that the postclosure care period for the hazardous waste disposal unit was performed in accordance with the specifications in the approved postclosure plan. The certification shall be signed by the owner or operator and an independent registered professional engineer. Documentation supporting the independent registered professional engineer's certification shall be furnished to the director upon request until the director releases the owner or operator from the financial requirements for postclosure pursuant to the provisions of R 299.9703.

(6) The environmental protection standards established pursuant to the provisions of part 201 of the act shall be used to perform closure and postclosure of a facility under part 111 of the act if the limits are not less stringent than those allowed pursuant to the provisions of RCRA.

(7) The provisions of 40 C.F.R. part 264, subpart G, except 40 C.F.R. §§264.112(d)(1), 264.115, and 264.120, are adopted by reference in R 299.11003. For the purposes of this adoption, the word "director" shall replace the words "regional administrator" and the words "R 299.9703(8) and R 299.9710(17)" shall replace the word "40 C.F.R. §264.140(d).

R 299.9614 Use and management of containers.

Rule 614. (1) Owners or operators of all hazardous waste facilities that store containers of hazardous waste shall do both of the following:

(a) Comply with all requirements of 40 C.F.R. part 264, subpart I. If the owner or operator is unable to comply with 40 C.F.R. §264.176 or the authority having jurisdiction determines that an alternative to the requirements of 40 C.F.R. §264.176 is more protective of human health and the environment, then compliance with 40 C.F.R. §264.176 is considered achieved by meeting the requirements of the fire prevention code and its rules. A copy of an approval letter indicating that the containers are stored in compliance with the fire prevention code and signed by the authority having jurisdiction shall be maintained at the facility.

(b) Ensure that each container is labeled or marked clearly with the words "Hazardous Waste" and the hazardous waste number.

(2) The provisions of 40 C.F.R. part 264, subpart I, are adopted by reference in R 299.11003.

R 299.9615 Tank systems.

Rule 615. (1) Owners or operators who use tank systems to treat or store hazardous waste shall comply with all of the requirements of 40 C.F.R. part 264, subpart J, except as provided in subrule (4) of this rule.

(2) Owners or operators of tank systems that are not in compliance with the containment requirements of 40 C.F.R. §264.193(b) to (f) shall do all of the following until either the tank system is brought into compliance with the standards of 40 C.F.R. §264.193(a) or until a variance is obtained as provided by 40 C.F.R. §264.193(h):

(a) Ensure that aboveground tank systems that are used for the treatment or storage of liquid hazardous wastes, or hazardous wastes which could generate free liquids during storage, are located in areas which are paved, diked, curbed, or otherwise structurally enclosed so as to be able to contain not less than 100% of the largest tank system within the enclosed area. Where the hazardous wastes that are stored are incompatible with the materials of construction of tank systems within the enclosed area, or where the tank systems are interconnected so that a loss from one tank system may lead to losses in other tank systems, the owner or operator shall ensure that all tank systems are structurally enclosed so as to be able to contain not less than 100% of the liquid portion of the material being stored in all tank systems.

(b) For underground tank systems that are used for the treatment or storage of liquid hazardous wastes, or hazardous wastes that could generate free liquids, do all of the following:

(i) Provide adequate secondary containment and a leachate collection and withdrawal system to contain any release of hazardous wastes or hazardous waste constituents from the tank system.

(ii) Conduct a complete inventory of hazardous wastes in the tank system not less than twice a month.

(iii) Conduct leachate sampling and analysis at least once a year. If the inventories required pursuant to paragraph (ii) of this subdivision indicate a loss of waste, leachate sampling and analysis shall be performed within 24 hours of the discovery of the loss.

(3) All tank systems which are put into service after July 14, 1986, or which are upgraded pursuant to the provisions of 40 C.F.R. §264.193 shall be assessed in accordance with the provisions of 40 C.F.R. §264.192(a)(3) and provided with the necessary corrosion protection as determined pursuant to the assessment.

(4) All tank systems shall be designed, constructed, operated, and maintained in compliance with the requirements of R 29.5101 to R 29.5504 pursuant to the provisions of act 207.

(5) Owners or operators shall label tank systems in accordance with the provisions of NFPA standard no. 704.

(6) The director may waive the interim secondary containment requirements of subrule (2) of this rule for wastewater treatment units and elementary neutralization units based upon an assessment of the hydrogeological aspects of the site with respect to the provisions of part 31 of the act, the nature and volume of the waste treated or stored, and the location and nature of the facility.

(7) NFPA standard no. 704 is adopted by reference in R 299.11002. The provisions of 40 C.F.R. part 264, subpart J, are adopted by reference in R 299.11003. For the purposes of this adoption, the word "director" shall replace the words "regional administrator" and "administrator" and the words "operating license application" shall replace the words "part B."

R 299.9616 Surface impoundments.

Rule 616. (1) Owners or operators of facilities that use surface impoundments to treat or store hazardous waste shall comply with the requirements of 40 C.F.R. part 264, subpart K, except

40 C.F.R. §264.221(f). For new surface impoundments or replacements or lateral expansions of existing surface impoundments where liners are constructed of materials that might allow wastes to migrate into the liner, such as compacted clay, the liner shall, at a minimum, be constructed in accordance with the standards for clay liners contained in R 299.9620(2) and shall be designed, constructed, and installed to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil, groundwater, or surface water at any time during the active life, including the closure period, of the impoundment.

(2) New surface impoundments or replacements or lateral expansions of existing surface impoundments shall contain a leak detection, containment, and removal system designed, constructed, operated, and maintained in accordance with R 299.9622, unless exempted under that rule.

(3) The owner or operator of an existing surface impoundment shall not close the impoundment as a landfill in accordance with the provisions of 40 C.F.R. §264.228 unless both of the following provisions are complied with:

(a) The site of the surface impoundment meets the location standards of R 299.9603 or can be engineered to meet these standards.

(b) The director does either of the following:

(i) Determines that all contaminated subsoils cannot be practicably removed.

(ii) Issues an operating license for a facility alteration.

(4) The provisions of 40 C.F.R. part 264, subpart K, except 40 C.F.R. §264.221(f), are adopted by reference in R 299.11003.

R 299.9617 Waste piles.

Rule 617. (1) Owners or operators of facilities that store or treat hazardous waste in piles shall comply with the provisions of 40 C.F.R. part 264, subpart L, except 40 C.F.R. §264.251(f). Where liners are constructed of materials that might allow waste to migrate into the liner, such as compacted clay, the liner shall be constructed in accordance with the standards for clay liners contained in R 299.9620(2).

(2) New waste piles shall contain a leak detection, containment, and removal system designed, constructed, maintained, and operated in accordance with R 299.9622, unless exempted under that rule.

(3) The provisions of 40 C.F.R. part 264, subpart L, except 40 C.F.R. §264.251(f), are adopted by reference in R 299.11003.

R 299.9618 Land treatment.

Rule 618. (1) Owners or operators of facilities that treat or dispose of hazardous waste in land treatment units shall comply with all requirements of 40 C.F.R. part 264, subpart M.

(2) The provisions of 40 C.F.R. part 264, subpart M, are incorporated by reference in R 299.11003.

R 299.9619 Landfills.

Rule 619. (1) Owners or operators of facilities that use landfills to dispose of hazardous waste shall comply with the design and operating requirements of 40 C.F.R. part 264, subpart N, except 40 C.F.R. §264.301(f).

(2) In addition to the liner system requirements of 40 C.F.R. §264.301, the owner or operator of a landfill shall design the liner system to meet the requirements of R 299.9620.

(3) All landfills shall contain a leak detection, collection, and removal system beneath the liner system that is designed, constructed, operated, and maintained pursuant to R 299.9622, unless the landfill is exempted pursuant to R 299.9622.

(4) In addition to the requirements of 40 C.F.R. §264.301(a), the leachate collection and removal system shall include all of the following:

(a) Not less than 30 centimeters of granular material that has a permeability of 1 x 10^{-2} cm/second or greater, as determined by ASTM standard no. D2434-68, or a layer of geosynthetic drainage materials with a transmissivity of 3 x 10-5 m^2/second or greater covered by a minimum of 30 centimeters of a protective layer of granular material with a permeability of 1 x 10^{-3} cm/second or greater, as determined by ASTM standard no. D2434-68.

(b) Either of the following:

(i) Provisions for discharging the leachate directly to a wastewater treatment unit.

(ii) Provisions for storing the quantity of leachate that is expected to be generated from all cells during a 24-hour, 100-year storm.

(c) Leachate sumps that have all of the following:

(i) A volume that can properly maintain a leachate head of no more than 30 centimeters (12 inches) on the liner.

(ii) A leachate removal system to remove liquid from the sump.

(iii) A device for continuously monitoring the quantity of leachate in the sump and removed from the landfill.

(5) The director may approve alternate design or operating practices to those specified in subrule (4) of this rule if the owner or operator demonstrates to the director that such design and operating practices, together with location characteristics, comply with both of the following requirements:

(a) The alternate design and operating practices shall prevent the migration of any hazardous constituent into the groundwater or surface water at least as effectively as the leachate collection and removal systems specified in subrule (4) of this rule.

(b) The alternate design and operating practices shall allow the detection of leaks of hazardous constituents through the top liner at least as effectively as the leachate collection and removal systems specified in subrule (4) of this rule.

(6) In addition to the closure and postclosure care requirements of 40 C.F.R. §264.310, the owner or operator of a landfill shall do all of the following with respect to closure and postclosure care:

(a) Close the facility so that the final cover includes all of the following unless the owner or operator substitutes an equivalent design which shall include a flexible membrane liner component with a minimum thickness of 1 millimeter (40 mil), depending on the type of material selected, and demonstrates to the director that it provides equivalent environmental protection:

(i) Compacted clay which is in compliance with the requirements of R 299.9620(3) and which is not less than 90 centimeters thick.

(ii) A flexible membrane liner shall be placed directly over the compacted clay layer required pursuant to subdivision (i).

(iii) Not less than 60 centimeters of additional material, such as topsoil, subsurface drainage media, or cobbles to prevent animal burrowing. The additional material shall be applied in a manner that protects the clay and any synthetic component from the effects of temperature, erosion, and rooted vegetation. For temperature protection, the additional material thickness shall equal not less than 60 centimeters or the maximum depth of frost penetration, whichever is greater. In order to provide a minimum base for root penetration, the top component of the additional material shall consist of not less than 15 centimeters of topsoil.

(iv) Slopes of the barrier layer, the drainage layer, and the top of the cover system shall not be less than 4% at any location.

(b) Establish shallow-rooted grasses at the earliest possible time and maintain the vegetation or use other erosion control measures so as to stabilize the cap and prevent erosion. Erosion shall be limited to not more than 2 tons per acre per year based on the universal soil loss equation.

(c) Establish a venting system to prevent the accumulations of gas. The venting system shall be installed in a manner that does not adversely affect the permeability of the cap and, if required pursuant to part 55 of the act, gas emissions shall be monitored, collected, and treated. The director shall exempt the owner or operator from this requirement if the owner or operator demonstrates that gas will not be generated in the landfill.

(7) The director may approve alternative designs and maintenance practices to those specified in subrule (6) of this rule for beneficial uses of closed landfills if the owner or operator demonstrates to the director that such designs and maintenance practices for the landfill cover system will provide equivalent environmental protection.

(8) The provisions of 40 C.F.R. part 264, subpart N, except 40 C.F.R. §264.301(f), are adopted by reference in R 299.11003. For the purposes of this adoption, the word "director" shall replace the words "regional administrator."

R 299.9620 Liner requirements for landfills, surface impoundments, and waste piles.

Rule 620. (1) A liner system shall be located, designed, constructed, and operated so that there is no direct contact between the liners and groundwater in a saturated zone such that moisture content would adversely affect the structural and containment integrity of the liners.

(2) The primary liner for a landfill shall be a composite liner. The composite liner shall be designed to have a flexible membrane liner meeting the requirements of 40 C.F.R. 264, subpart N, directly over compacted clay which is a minimum of 150 centimeters thick and meets the requirements of subrule (3) of this rule.

(3) A compacted clay liner that is designed to meet the requirements of 40 C.F.R. §§264.221, 264.251, and 264.301, which are adopted by reference in R 299.11003, or R 299.9619 shall meet all of the following requirements for that clay liner:

(a) Comply with the criteria for a unified soil classification of CL or CH as determined by the provisions of ASTM standard D2487-11.

(b) Have more than 25% of the soil particles be less than 5 microns in size.

(c) Be placed in horizontal lifts of not more than 25 centimeters and be uniformly and thoroughly compacted to the standards approved in the design. The lift thickness shall not be more than 25 centimeters (six inches) after compaction. However, the material shall not be compacted to less than 90% of the maximum dry density, as determined by the modified proctor test described in the provisions of ASTM standard D1557-12, or 95% of the maximum dry density, as determined by the standard proctor test described in the provisions of ASTM standard D698-12, which are adopted by reference in R 299.11001, and the moisture content shall be within a range of -2% to +5% of the optimum moisture content.

(d) Have a maximum permeability coefficient of 1.0×10^{-7} cm/sec or less at all points.

(4) The waste pile or landfill base floor shall be graded to a minimum slope of 2% in directions perpendicular to the leachate collection pipes to promote drainage. The leachate pipes shall be laid on a slope of 1% or more in a direction to intercept liquid flow. The director may approve an alternate design to those specified in this subrule if the owner or operator demonstrates to the director that such design, together with location characteristics, complies with both of the following requirements:

(a) The alternate design will prevent the migration of any hazardous constituent into the groundwater or surface water at least as effectively the design requirements specified in this subrule.

(b) The alternate design will allow the detection of leaks of hazardous constituents through the top liner at least as effectively as the design requirements specified in this rule.

(5) Liner systems and leachate collection systems shall be designed to prevent the damage of the materials of both systems in the event of differential settlement of the foundation under worst case

conditions.

R 299.9621 Quality control for landfills, surface impoundments, and waste piles.

Rule 621. (1) Owners or operators of landfills, surface impoundments, and waste piles shall conduct a quality control program during construction which shall assure all of the following:

(a) That the natural clay base meets or exceeds the thickness and permeability requirements of R 299.9603(5), by doing either of the following:

(i) Obtaining soil borings and determining the natural moisture content as determined by ASTM standard D2216-10, grain size distribution (sieve and hydrometer) as determined by ASTM standards D6913-04 and D7928-16, classification by the unified soil classification system as determined by ASTM standard D2487-11, and Atterburg limits of the soil as determined by ASTM standard D4318-10 at varying depths every 100 feet, and the permeability of an undisturbed sample every 200 feet as determined by ASTM standard D5084-10.

(ii) Utilizing resistivity surveys to replace or supplement borings specified in paragraph (i) of this subdivision. Such resistivity surveys shall employ an electrode spacing to give an effective depth of penetration. A sufficient number of stations shall be used to insure that complete coverage to the edge of the waste management area is provided and correlation with borings or wells is obtained.

(b) That the natural clay base provides an adequate sub-base for overlying liners and leachate collection and removal systems, by evaluating the subgrade conditions for stability and correcting wet or unstable areas.

(c) That compacted clay liners meet or exceed the requirements of R 299.9620(2), by doing all of the following:

(i) Constructing the liner such that the bottom liner and the side wall liner (dike) will be continuous and completely keyed together at all construction joints.

(ii) During winter construction, removing all ice and snow before placing the liner and not using frozen soil in any part of liner.

(iii) Determining the field density-moisture of the liner material by utilizing the provisions of ASTM standard D6938-15 for each 1,000 cubic yards placed, with a minimum of 1 test per day of construction or layer of clay placed.

(iv) Determining the particle size distribution (sieve and hydrometer) according to ASTM standards D6913-04 and D7928-16, Atterburg limits according to ASTM standard D4318-10, and natural moisture content according to ASTM standard D2216-10 of random samples of liner material from each 5,000 cubic yards of material placed.

(v) Redetermining the density of liner materials by the modified proctor test, ASTM standard D1557-12, when the texture of the soil changes and every 5,000 cubic yards placed.

(vi) Determining the permeability with water of a soil sample every 10,000 cubic yards placed by using ASTM standard D5084-10, which is adopted by reference in R 299.11001, or other method approved by the director on a sample that is not less than 2.8 inches in diameter.

(vii) Verifying liner thickness and subgrade slope by a final elevation check to ensure that all of the following requirements are met:

(A) The final elevation shall be within plus or minus 0.2 feet of the approved plans.

(B) The slope reduction of the subgrade shall not be greater than 10% of the approved slopes.

(C) The final clay liner thickness shall not be less than the approved thickness at any point.

(d) That synthetic liners are properly installed, by doing all of the following:

(i) Properly preparing the foundation for the liner by doing all of the following:

(A) Compacting to the requirements of R 299.9620.

(B) Grading the foundation to a smooth and true line.

(C) Grading consistent with approved plans.

(D) Grading the foundation to be free from stones or deleterious material.

(E) Removing any vegetation from the foundation before installation of the liner.

(ii) Insuring that field seaming is done under the direction of a registered professional engineer and when weather conditions are favorable for installation.

(iii) Insuring that field seams, joints, and mechanical seals are properly made by wiping contact surfaces clean of dirt, dust, moisture, or other foreign material, assuring that seaming is done in accordance with manufacturer specifications, and testing all field seams by nondestructive tests approved by the director.

(iv) Recording the ambient temperature and liner temperature hourly during liner installation or field seaming.

(e) That leachate collection and leak detection, collection, and removal systems are installed such that the requirements of this rule are met, by doing both of the following:

(i) Making elevation checks at least every 200 feet to verify the appropriate thickness of granular material.

(ii) Sampling randomly at least every 5,000 cubic yards placed to verify the required aggregate classification.

(2) The quality control program required by subrule (1) of this rule shall be documented by written daily records of all work and tests performed during construction. All daily records shall be kept in the operating record for the facility and be made available for inspection by the director or his or her authorized representative.

(3) ASTM standards D2216-10, D2487-11, D1557-12, D2434-68, D4318-10, D5084-10**,** D6913-04, and D7928-16 are adopted by reference

R 299.9622 Leak detection systems.

Rule 622. (1) Each new unit and lateral expansion or replacement of an existing unit at a landfill, surface impoundment, waste pile, or land treatment facility shall include a leak detection system capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time.

(2) If contamination is detected in the leak detection system required by this rule, the owner or operator shall do all of the following:

(a) Immediately notify the director or his or her designee.

(b) Within 30 days, determine what failures have occurred in the liner system.

(c) If failures have occurred, do either of the following on a schedule which insures the protection of human health and the environment:

(i) Repair the failures in the liner system and obtain the certification of a registered professional engineer that, to the best of his or her knowledge and opinion, the failure has been corrected.

(ii) Cease placing waste in the failed unit and take action to prevent the migration of hazardous waste and hazardous waste constituents from the facility.

(3) The director shall grant an exemption from the requirements for a leak detection system if the owner or operator satisfies the waiver requirements for 2 liners and a leachate collection system between such liners established under the provisions of 40 C.F.R. part 264.301.

R 299.9623 Incinerators.

Rule 623. (1) Owners and operators of facilities that incinerate hazardous waste shall comply with all requirements of this rule, except as subrule (2) of this rule provides otherwise. The following facility owners or operators are considered to incinerate hazardous waste:

(a) Owners or operators of hazardous waste incinerators as defined in R 299.9104.

(b) Owners or operators who burn hazardous waste in boilers or in industrial furnaces to destroy the

wastes.

(2) Except as noted in this subrule and subrule (3) of this rule, part 6 of the rules does not apply to owners and operators of new hazardous waste incinerators that become subject to the license requirements of these rules after October 12, 2005, or to owners or operators of existing facilities that incinerate hazardous waste if the owner or operator demonstrates compliance with the air emission standards and limitations in 40 C.F.R. part 63, subpart EEE, by conducting a comprehensive performance test and submitting to the director a notification of compliance under 40 C.F.R. §§63.1207(j) and 63.1210(d) which documents compliance with the requirements of 40 C.F.R. part 63, subpart EEE. Nevertheless, even after this compliance demonstration is made, the operating license conditions that are based on the standards of part 6 of the rules will continue to be in effect until they are removed from the operating license or the operating license is terminated or revoked, unless the operating license expressly provides otherwise. The director may apply this subrule and subrule (3) of this rule, on a case-by-case basis, for collecting information pursuant to R 299.9504(18) and (20) and R 299.9521(3)(b) and (c).

(3) The maximum achievable control technology standards of 40 C.F.R. part 63, subpart EEE, do not supersede any of the following requirements:

(a) R 299.9601, R 299.9605 to R 299.9610, R 299.9612, R 299.9613, R 299.9630, R 299.9631, and part 7 of these rules.

(b) The particulate matter standard of 40 C.F.R. §264.343(c), if the owner or operator elects to comply with the alternative to the particulate standard of 40 C.F.R. §§63.1206(b)(14)-and 63.1219(e).

(c) The following requirements remain in effect for startup, shutdown, and malfunction events even if a person elects to comply with 40 C.F.R. §270.235(a)(1)(i) to minimize emissions of toxic compounds from these events:

(i) The requirements of 40 C.F.R. §264.345(a) which require that an incinerator operate pursuant to the operating requirements specified in the operating license.

(ii) The requirements of 40 C.F.R. §264.345(c) which require 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.

(4) Owners and operators of facilities that incinerate hazardous waste shall comply with 40 C.F.R. part 264, subpart O, except 40 C.F.R. §264.340(a) to (d) and 264.344(a)(2) and (b).

(5) The owner or operator of a hazardous waste incinerator shall burn only wastes specified in his or her operating license and only under operating conditions specified for those wastes under this rule, except in approved trial burns or trial operations. Other hazardous wastes may be burned only after operating conditions have been specified in an operating license. Operating requirements for new wastes may be based on either trial burn results or alternative data included with the operating license application.

(6) The operating license for a new incinerator or the expansion, enlargement, or alteration of an existing incinerator shall establish appropriate conditions for each of the applicable requirements of this part, including, but not limited to, allowable waste feeds and operating conditions necessary to meet the requirements of 40 C.F.R. §264.345 and sufficient to comply with 40 C.F.R. §264.344(c)(1) and (2) for the period before and during the trial burn.

(7) The director may require trial operation of an incinerator and the submittal of a trial operations plan containing the information specified in 40 C.F.R. §270.62(b)(2) under the following circumstances:

(a) Before the renewal of an incinerator's operating license under part 111 of the act.

(b) Before the licensing of an incinerator newly subjected to the license requirements of part 111 of the act and these rules.

(c) Before the approval of new waste types through an operating license modification.

(d) The director has evidence that an incinerator may be emitting hazardous constituents in quantities which violate part 55 of the act or these rules.

(8) The requirements of 40 C.F.R. §270.62(a) to (d) shall apply to facilities incinerating hazardous waste, except as otherwise provided in these rules.

(9) An incinerator burning hazardous waste shall be designed, constructed, and maintained so that it will comply with part 55 of the act.

(10) The director may, in addition, specify one or more principal organic hazardous constituents from the lists of hazardous waste or hazardous constituents contained in tables 201 to 206 of these rules.

(11)The provisions of 40 C.F.R. part 63, subpart EEE; 40 C.F.R. part 261, appendix VIII; 40 C.F.R. part 264, subpart O, except 40 C.F.R. §264.340(a) to (d) and §264.344(a)(2) and (b); and 40 C.F.R. §§270.62(a) to (d) and 270.235(a)(1)(i), are adopted by reference in R 299.11003. For the purposes of this adoption, the references to "§124.10" shall be replaced with "R 299.9511," "270.19" shall be replaced with "R 299.9504," "§270.42" shall be replaced with "R 299.9519," and the word "permit" shall be replaced with "operating license."

R 299.9624 Rescinded.

R 299.9625 Rescinded.

R 299.9626 Rescinded.

R 299.9627 Land disposal restrictions.

Rule 627. (1) The owner or operator of a treatment, storage, or disposal facility shall comply with the restrictions on land disposal contained in 40 CFR part 268.

(2) 40 CFR part 268 is are adopted by reference in R 299.11003. For purposes of adoption, the-term "director" replaces the terms "administrator" and "assistant administrator," the term "R 299.9305, R 299.9306, and R 299.9307"replaces the term "§§262.15, 262.16, and 262.17," the term "part 6 of these rules" replaces the term "parts 264 and 265 of this chapter," and the term "part 2 of these rules" replaces the term "subparts C and D of part 261 of this chapter," except in 40 CFR 268.5, 268.6, 268.40(b), 268.42(b), and 268.44(a) to (g) and (i) to (o).

R 299.9628 Requirements for miscellaneous units.

Rule 628. (1) An owner or operator of a facility that treats, stores, or disposes of hazardous waste in miscellaneous units shall comply with the provisions of 40 C.F.R. part 264, subpart X.

(2) Treatment of hazardous waste shall not be allowed in an underground mine or cave.

(3) In addition to the requirements of 40 C.F.R. part 264, subpart X, and all other applicable requirements of these rules, an owner or operator of a facility that stores or disposes of hazardous waste in an underground mine or cave shall design, operate, and maintain the facility throughout its active life and after closure to insure all of the following:

(a) Management of water so as to maintain the integrity of the mine or cave and protect human health and the environment.

(b) Proper transportation of waste from any surface operation to the final disposal or storage area in the mine or cave so as to prevent the release of a hazardous waste or hazardous waste constituent.

(c) Development of a waste placement map and maintenance of a daily log identifying waste placement locations and correlating those waste placement locations to surface property boundaries.

(d) That the mine or cave is not penetrated by drilling or otherwise adversely impacted by off-site activities.

(4) The provisions of 40 C.F.R. part 264, subpart X, are adopted by reference in R 299.11003.

R 299.9629 Corrective action.

Rule 629. (1) Owners or operators of facilities that treat, store, or dispose of hazardous waste shall conduct corrective action as necessary to protect the public health, safety, welfare, and the environment pursuant to a corrective action program approved by the director, unless otherwise specified in this rule. The corrective action program shall be conducted as follows:

(a) Owners or operators of facilities that apply for, or have been issued, an operating license pursuant to part 111 of the act shall institute corrective action for all releases of a contaminant from any waste management units at the facility, regardless of when the contaminant may have been placed in or released from the waste management unit.

(b) Owners or operators of facilities that are not included in subdivision (a) of this subrule and for which the owner or operator, or both, is or was subject to the interim status requirements defined in RCRA, except for facilities that have received formal written approval of the withdrawal of their EPA part A hazardous waste permit application from the director or the EPA, shall institute corrective action for all releases of hazardous waste from the facility, regardless of when the hazardous waste may have been placed in or released from the facility.

(2) Owners or operators shall implement corrective action beyond the facility boundary if the releases referenced in subrule (1) of this rule have or may have migrated, or otherwise have or may have been emitted, beyond the facility boundary, 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 is unable to obtain the necessary permissions to undertake such actions. The owner or operator shall not be relieved of all responsibility to clean up a release that has migrated or been emitted 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.

(3) The owners or operators who are required to establish a corrective action program pursuant to part 111 of the act and these rules shall, at a minimum, do the following, as applicable:

(a) For facilities that are specified in subdivision (a) of subrule (1) of this rule, the owner or operator, or both, shall take corrective action to ensure compliance with the groundwater protection standards, and, if necessary, other applicable environmental protection standards, established by the director. The director shall specify in an operating license, postclosure operating license, consent order, or other order, pursuant to this rule and R 299.9635 and R 299.9636, schedules of compliance for corrective action and assurances of financial responsibility for completing the corrective action and other requirements, including, any of the following:

(i) A list of the hazardous wastes and hazardous constituents. The list of hazardous constituents are identified pursuant to 40 C.F.R. §264.93.

(ii) The groundwater protection standards which are expressed as concentration limits that are established pursuant to R 299.9612(1)(d) or as concentration limits established pursuant to part 31 or part 201 of the act, if the limits are not less stringent than allowed pursuant to RCRA.

(iii) The environmental protection standards which are necessary for the cleanup and protection of soil, surface water, sediments, and ambient and indoor air that are established pursuant to part 201 of the act on the effective date of these rules if the limits are not less stringent than allowed pursuant to RCRA.

(iv) The compliance point or points at which the standards apply and at which monitoring shall be conducted, which for groundwater are specified pursuant to 40 C.F.R. §264.95.

(v) The compliance period, which for groundwater is specified pursuant to 40 C.F.R. §264.96.

(vi) The restoration and mitigation measures that are necessary to mitigate damage to the natural

resources of the state, including wildlife, fish, wetlands, or other ecosystems.

(b) For facilities that are specified in subdivision (b) of subrule (1) of this rule, the owner or operator, or both, shall take corrective action to ensure compliance with the groundwater protection standards, and, if necessary, other applicable environmental protection standards, established by the director. The director shall specify in a consent order or other order, pursuant to this rule and R 299.9635 and R 299.9636, schedules of compliance for corrective action and assurances of financial responsibility for completing the corrective action and other requirements, including any of the following:

(i) A list of the hazardous wastes and hazardous waste constituents.

(ii) The groundwater protection standards which are expressed as concentration limits that are established pursuant to part 31 or part 201 of the act if the limits are not less stringent than allowed pursuant to RCRA.

(iii) The environmental protection standards which are necessary for the cleanup and protection of soil, surface water, sediments, and ambient and indoor air that are established pursuant to part 201 of the act on the effective date of these rules if the limits are not less stringent than allowed pursuant to RCRA.

(iv) The compliance point or points at which the standards apply and at which monitoring shall be conducted.

(v) The compliance period.

(vi) The restoration and mitigation measures that are necessary to mitigate damage to the natural resources of the state, including wildlife, fish, wetlands, or other ecosystems.

(4) The owner or operator shall implement a corrective action program that prevents contaminants, hazardous wastes, or hazardous waste constituents, as provided for in subrule (1) of this rule, from exceeding their respective protection standards or concentration limits at the compliance point by removing the contaminants, hazardous wastes, or hazardous waste constituents or treating them in place.

(5) For facilities that are conducting a groundwater compliance monitoring program at the time an operating license, postclosure operating license, consent order, or other order is issued or entered, the owner or operator shall begin groundwater corrective action within a reasonable time period after the groundwater protection standard is exceeded. The director shall specify the time period in the operating license, postclosure operating license, consent order, or other order. If a**n** operating license, postclosure operating license, consent order, or other order includes a groundwater corrective action program in addition to a compliance groundwater monitoring program, then the operating license, postclosure operating license, consent order, or other order shall specify when the corrective action groundwater program will begin and the corrective action groundwater program shall operate in place of the compliance groundwater monitoring program.

(6) In conjunction with a groundwater corrective action program, the owner or operator shall establish and implement a groundwater monitoring program to demonstrate the effectiveness of the groundwater corrective action program. The monitoring program may be based on the requirements for a compliance groundwater monitoring program and shall be as effective as that program in determining compliance with the groundwater protection standards specified in the operating license, postclosure operating license, consent order, or other order and in determining the success of a corrective action program pursuant to the provisions of subrule (8) of this rule, where appropriate. All wells installed to monitor, evaluate, or remediate groundwater shall be constructed and abandoned in accordance with the well installation and well decommissioning procedures in ASTM standards D5092-04 and D5299-14, or a plan approved by the director.

(7) If there is an exceedance of a groundwater surface water interface standard based on acute toxicity and established pursuant to part 201 and part 31 of the act, at any of the groundwater surface

water interface compliance monitoring wells required by these rules and approved by the department, then the owner or operator shall immediately do all of the following:

(a) Provide the department with written notification of the exceedance within 7 days of obtaining knowledge and confirmation that the exceedance is occurring or within 30 days of the effective date of this rule, whichever is later.

(b) Within 60 days of the date on which the notice in subdivision (a) of this subrule is required, do 1 or more of the following, unless an extension of a submittal or implementation deadline is approved by the department. In reviewing extension requests, the department shall consider the progress of any corrective action to date, whether or not site conditions inhibit corrective action implementation, whether or not the extension would adversely impact surface water resources, and the nature and extent of the exceedances.

(i) Implement interim measures to prevent exceedances at the monitoring wells referenced in this subrule and submit to the department a proposal and schedule for completing corrective action to prevent a discharge that exceeds the standard.

(ii) Provide the department with written notification of the owner or operator's intent to propose another compliance monitoring point if one has yet not been approved by the department. The notification shall include a schedule for submission of the proposal for department approval. The department may approve the schedule as submitted or direct reasonable modifications in the schedule. The proposal for another compliance monitoring point shall include all of the following:

(A) A demonstration that the proposed compliance monitoring points are more representative of the venting groundwater and allow a more accurate calculation of the discharge rate, in cubic feet per second, of that portion of the venting groundwater plume that exceeds, or is likely to exceed in the future, a groundwater surface water interface standard, than existing compliance monitoring wells.

(B) A demonstration that the locations where venting groundwater enters surface water have been comprehensively identified.

(C) A demonstration that the proposed compliance monitoring point allows for venting groundwater to be sampled before mixing with surface water.

(D) A demonstration that the proposed compliance monitoring point allows for reliable, representative monitoring of groundwater quality.

(E) Identification and documentation of the chemical, physical, or biological processes that result in the reduction of hazardous constituents between the original compliance monitoring wells required by these rules and the proposed compliance monitoring points.

(F) Consideration of changes in groundwater flow conditions so that samples collected from the proposed compliance monitoring point are representative of groundwater flowing to the surface water. The proposed compliance monitoring points may be located in a floodplain.

(G) Identification of any sentinel monitoring points that will be used in conjunction with the proposed compliance monitoring point to assure that any potential exceedance of an applicable water quality standard can be identified with sufficient notice to allow additional corrective action to be implemented that will prevent the exceedance. Sentinel monitoring points shall include, at a minimum, the original compliance monitoring wells required by these rules.

(iii) Provide the department with written notification of the owner or operator's intent to propose a site-specific standard under MCL 324.20120a(2). The notification shall include a schedule for submission of the proposal for department approval. The department may approve the schedule as submitted or direct reasonable modifications in the schedule.

(c) If the owner or operator does not implement an effective corrective action; submit the notices, proposals, and schedules required in subdivision (b) of this subrule; or comply with the schedules established under subdivision (b) of this subrule; and no extension was approved by the department, the owner or operator shall continue implementation of interim measures to prevent the exceedance

until another compliance monitoring point or site-specific standard is approved by the department, or if the proposal is not approved by the department, until a different corrective action is implemented to protect the surface water. If another compliance monitoring point was approved by the department before detection of the exceedance in that compliance monitoring point, corrective action shall continue as long as there is a reasonable potential for an exceedance to occur, or until a different corrective action is implemented to protect the surface water. The owner or operator shall document the interim measures taken to prevent the exceedance and their effectiveness during the time that the department is reviewing a proposal. If the proposal required under paragraph (ii) of subdivision (b) of this subrule does not adequately document the interim measures required to satisfy this rule, it shall be considered incomplete and the department shall not make a decision on the proposal.

(8) In addition to the other requirements of this rule, the owner or operator shall conduct a corrective action program to remove or treat in place any contaminants, hazardous wastes, and hazardous waste constituents, as provided for in subrule (1) of this rule, that exceed the groundwater protection standards or other environmental protection standards that are specified by the director as follows:

(a) Between the compliance points that are established pursuant to subrule (3)(a)(iv) and (b)(iv) of this rule and the downgradient property boundary and beyond the facility boundary in accordance with subrule (2) of this rule.

(b) Corrective action measures that are undertaken pursuant to this rule shall be initiated and completed within a reasonable period of time considering the extent of contamination.

(c) Corrective action measures that are pursuant to this rule may be terminated once the environmental protection standards specified by the director in the facility operating license, postclosure operating license, consent order, or other order have been achieved for the required period.

(9) The owner or operator shall continue corrective action measures during the compliance period to the extent necessary to ensure that the environmental protection standards are not exceeded. If the owner or operator is conducting corrective action at the end of the compliance period, then corrective action shall continue for as long as necessary to achieve compliance with the environmental protection standards. 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 the owner or operator can demonstrate that the environmental protection standards have been achieved for the required period.

(10) The owner or operator shall report, in writing, to the director, on the effectiveness of the corrective action program pursuant to the schedule specified in the operating license, postclosure operating license, consent order, or other order, but not less than annually.

(11) If an owner or operator determines that the corrective action program does not satisfy the requirements of these rules, he or she shall, pursuant to the operating license, postclosure operating license, consent order, or other order, submit an application for a license modification or request a modification or termination of appropriate sections of any consent order or other order.

(12) The requirements of this rule do not apply to remediation waste management sites unless they are part of a facility subject to the licensing requirements under part 111 of the act and these rules because the facility is also treating, storing, or disposing of hazardous wastes that are not remediation wastes.

R 299.9630 Air emission standards for process vents.

Rule 630. (1) Owners or operators of treatment, storage, or disposal facilities shall comply with the provisions of 40 C.F.R. part 264, subpart AA.

(2) The provisions of 40 C.F.R. part 264, subpart AA are adopted by reference in R 299.11003. For

the purposes of this adoption, the word "director" shall replace the words "regional administrator" and "administrator."

R 299.9631 Air emission standards for equipment leaks.

Rule 631. (1) Owners or operators of treatment, storage, or disposal facilities shall comply with the provisions of 40 C.F.R. part 264, subpart BB.

(2) The provisions of 40 C.F.R. part 264, subpart BB are adopted by reference in R 299.11003. For the purposes of this adoption, the word "director" shall replace the words "regional administrator" and "administrator."

R 299.9632 Drip pads.

Rule 632. (1) Owners or operators of facilities that use new or existing drip pads to convey treated wood drippage, precipitation, or surface water run-off to an associated collection system shall comply with the provisions of 40 C.F.R. part 264, subpart W.

(2) For the purposes of this rule, existing drip pads are those constructed before December 6, 1990, and those for which the owner or operator had a design and had entered into binding financial or other agreements for construction prior to December 6, 1990. All other drip pads are new drip pads.

(3) The provisions of 40 C.F.R. part 264, subpart W, are adopted by reference in R 299.11003. For the purposes of this adoption, the word "director" shall replace the words "regional administrator" and "administrator."

R 299.9633 Hazardous waste treatment.

Rule 633. (1) An owner or operator of a facility that treats hazardous waste shall ensure that the treatment process will change the physical, chemical, or biological character or composition of the waste to do any of the following:

(a) Neutralize the waste.

(b) Recover energy or material resources from the waste.

(c) Render the waste nonhazardous, safer for handling or transport, amenable to recovery, amenable to storage, or reduced in volume.

(d) Chemically bind or render toxic constituents nonhazardous rather than only diluted.

R 299.9634 Air emission standards for tanks, surface impoundments, and containers.

Rule 634. (1) Owners or operators of treatment, storage, or disposal facilities shall comply with the provisions of 40 C.F.R. part 264, subpart CC.

(2) The provisions of 40 C.F.R. part 264, subpart CC, are adopted by reference in R 299.11003. For the purposes of this adoption, the word "director" shall replace the words "regional administrator" and "administrator."

R 299.9635 Corrective action management unit requirements.

Rule 635. (1) Unless otherwise specified in this rule, corrective action management units shall be subject to all of the requirements of this rule.

(2) Corrective action management units that were approved before April 22, 2002, or for which substantially complete applications or equivalents were submitted to the department on or before November 20, 2000, shall only be subject to the requirements of this subrule. The waste, activities, and design associated with these grandfathered corrective action management units shall not be subject to subrules (3) to (20) of this rule provided the waste, activities, and design remain within the general scope of the corrective action management unit as approved. With respect to these grandfathered corrective action management units, the term corrective action management unit shall

mean an area within a facility that is used only for managing remediation wastes for implementing corrective action or cleanup at the facility. For the purposes of implementing corrective action remedies under part 111 of the act and these rules or implementing remedies at licensed facilities that are not subject to corrective action under part 111 of the act and these rules, the director may designate in a license or enforceable document an area of a facility as a corrective action management unit. Corrective action management units shall be located within the contiguous property under the control of the owner or operator where the wastes to be managed in the corrective action management unit originated. One or more corrective action management units may be designated at a facility.

(3) For the purposes of implementing corrective action remedies under part 111 of the act and these rules or implementing remedies at licensed facilities that are not subject to corrective action under part 111 of the act and these rules, the director may designate in a license or enforceable document an area at a facility as a corrective action management unit. With respect to these corrective action management units, the term corrective action management unit means an area within a facility that is used only for managing corrective action management unit-eligible wastes for implementing corrective action or cleanup at the facility. A corrective action management unit shall be located within the contiguous property under the control of the owner or operator where the wastes to be managed in the corrective action management unit originated. One or more corrective action management units may be designated at a facility.

(4) The director may prohibit, where appropriate, the placement of waste in a corrective action management unit if the director has or receives information that the waste has not been managed in compliance with applicable land disposal treatment standards of 40 C.F.R. part 268 or applicable unit design requirements of part 6 of these rules, or that noncompliance with other applicable requirements of part 6 of these rules likely contributed to the release of the waste.

(5) 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 corrective action management unit is prohibited except where the placement of such waste facilitates the remedy selected for the waste. The requirements in R 299.9619 for placement of containers holding free liquids in landfills apply to placement in a corrective action management unit except where the placement facilitates the remedy selected for the waste. The placement of any liquid which is not a hazardous waste in a corrective action management unit is prohibited unless such placement facilitates the remedy selected for the waste or a demonstration is made pursuant to R 299.9619. The absence or presence of free liquids in either a containerized or a bulk waste shall be determined pursuant to R 299.9619. Sorbents used to treat free liquids in corrective action management units shall meet the requirements of R 299.9619.

(6) The placement of corrective action management unit-eligible wastes into or within a corrective action management unit does not constitute land disposal for the purposes of part 111 of the act or these rules.

(7) The consolidation or placement of corrective action management unit-eligible wastes into or within a corrective action management unit does not constitute the creation of a unit subject to the minimum technology requirements of these rules.

(8) The director may designate a hazardous waste management unit as a corrective action management unit or incorporate a hazardous waste management unit into a corrective action management unit provided both of the following requirements are met:

(a) The hazardous waste management unit is closed or the closure process under part 6 of these rules has been initiated.

(b) The inclusion of the hazardous waste management unit into the corrective action management unit will enhance the implementation of effective, protective, and reliable remedial actions for the facility.

(9) All of the following requirements that applied to the hazardous waste management unit continue

to apply to that portion of a corrective action management unit containing the hazardous waste management unit regardless of the designation of the hazardous waste management unit as a corrective action management unit or the incorporation of the hazardous waste management unit into a corrective action management unit:

(a) R 299.9612.

(b) R 299.9629.

(c) 40 C.F.R. part 265, subpart F.

(d) R 299.9613.

(e) 40 C.F.R. part 265, subpart G.

(f) Part 7 of these rules.

(g) The unit-specific requirements of part 6 of these rules that applied to the hazardous waste management unit.

(10) In designating an area at a facility as a corrective action management unit the director shall ensure that the corrective action management unit meets all of the following requirements:

(a) The corrective action management unit facilitates the implementation of reliable, effective, protective, and cost-effective remedies.

(b) The waste management activities associated with the corrective action management unit do not create unacceptable risks to humans or to the environment which result from exposure to hazardous wastes or hazardous constituents.

(c) The corrective action management unit contains only contaminated areas of the facility unless the inclusion of uncontaminated areas of the facility for the purpose of managing corrective action management unit-eligible waste is more protective than management of such wastes at contaminated areas of the facility.

(d) Areas within the corrective action management unit where wastes will remain in place after closure of the unit are managed and contained so as to minimize future releases, to the extent practicable.

(e) The corrective action management unit expedites the timing of remedial activity implementation, when appropriate and practicable.

(f) The corrective action management unit enables the use, when appropriate, of treatment technologies to enhance the long-term effectiveness of the remedial actions by reducing the toxicity, mobility, or volume of wastes that will remain in place after closure of the unit.

(g) The corrective action management unit, to the extent practicable, minimizes the land area of the facility upon which wastes will remain in place after closure of the unit.

(11) The owner or operator shall provide the director with sufficient information to enable the director to designate a corrective action management unit pursuant to the criteria specified in this rule. Information on all of the following shall be included unless it is not reasonably available:

(a) The origin of the waste and how it was subsequently managed, including a description of the timing and circumstances surrounding the disposal or release.

(b) Whether the waste was listed or identified as hazardous at the time of disposal or release.

(c) Whether the disposal or release of the waste occurred before or after the land disposal requirements of 40 C.F.R. part 268 were in effect for the waste listing or characteristic.

(12) The director shall specify all of the following information in the license or order for each corrective action management unit:

(a) The areal configuration of the corrective action management unit.

(b) Except as provided for in subrule (16) of this rule, the requirements for corrective action management unit-eligible waste management, including the specification of applicable design, operation, treatment, and closure requirements.

(c) The minimum design requirements for the corrective action management unit. Except as

provided in subrule (15) of this rule, corrective action management units 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-centimeter depth of leachate over the liner. The composite liner system shall consist of two components; the upper component shall consist of a minimum 30-mil flexible membrane liner, and the lower component shall consist of at least a 2-foot layer of compacted soil with a hydraulic conductivity of not more that 1×10^{-7}cm/second. Flexible membrane liner components consisting of high density polyethylene shall be at least 60 mil thick and shall be installed in direct and uniform contact with the compacted soil component. The director may approve alternate design requirements if the director determines either of the following:

(i) Alternate design and operating practices, together with location characteristics, shall prevent the migration of any hazardous constituents into the groundwater or surface water at least as effectively as the liner and leachate collection systems requirements specified in this subdivision.

(ii) The corrective action management unit is to be established in an area with existing significant levels of contamination, and an alternative design, including a design that does not include a liner, shall prevent migration from the unit that would exceed long-term remediation goals.

(d) The minimum treatment requirements. Unless the wastes will be placed in a corrective action management unit for storage or treatment only pursuant to subrule (15) of this rule, corrective action management unit-eligible wastes that, absent this rule, would be subject to the land disposal treatment standards of 40 C.F.R. part 268, and that the director determines contain principal hazardous constituents, shall be treated to the standards specified in this subdivision. 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. Principal hazardous constituents include carcinogens that pose a potential direct risk from ingestion or inhalation at the site at or above 10^{-3}, non-carcinogens that pose a potential direct risk from ingestion or inhalation an order of magnitude or greater over their reference dose, other constituents if the risks to human health and the environment posed by the potential migration of the constituents in the wastes to groundwater are substantially higher than the cleanup levels or goals at the site after considering constituent concentrations, and fate and transport characteristics under site conditions, and other constituents that pose a risk to human health and the environment substantially higher than the cleanup levels or goals at the site. The treatment standards for wastes placed in corrective action management units are as follows, unless the director adjusts the treatment level or method pursuant to subrule (13) of this rule:

(i) For non-metals, the treatment shall achieve 90% reduction in total principal hazardous constituent concentrations.

(ii) For metals, the treatment shall achieve 90% reduction in principal hazardous constituent concentrations as measured in leachate from the treated waste or media, and tested according to the toxicity characteristic leaching procedure, or 90% reduction in total constituent concentrations when a metal removal treatment technology is used. For metal bearing wastes for which metals removal treatment is not used, the director may specify a leaching test other than the toxicity characteristic leaching procedure to measure treatment effectiveness if 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.

(iii) When treatment of any principal hazardous constituent to a 90% reduction standard would result in a concentration less than 10 times the universal treatment standard for that constituent as outlined in 40 C.F.R. §268.48, treatment to achieve constituent concentrations less than 10 times the universal treatment standard is not required.

(iv) For waste exhibiting the hazardous characteristic of ignitability, corrosivity, or reactivity, the waste shall also be treated to eliminate these characteristics.

(v) For debris, the debris shall be treated pursuant to 40 C.F.R. §268.45, or by methods or to levels established under subparagraphs (i), (ii), (iii), and (iv) of this subdivision or subrule (13) of this rule, whichever the director determines is appropriate.

(e) The requirements for groundwater monitoring and corrective action as necessary to provide for all of the following:

(i) The continued detection and characterization of the nature, extent, concentration, direction, and movement of existing releases of hazardous constituents in the groundwater from sources located within the corrective action management unit.

(ii) The detection and subsequent characterization of releases of hazardous constituents to the groundwater that may occur from areas of the corrective action management unit in which wastes will remain in place after closure of the unit.

(iii) The notification of the director and corrective action as necessary to protect human health and the environment for releases to groundwater from the corrective action management unit.

(f) Closure requirements as necessary to minimize the need for further maintenance and control, minimize, or eliminate, to the extent necessary to protect human health and the environment, for areas where wastes remain in place, postclosure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground, surface waters, or atmosphere. The requirements for closure shall include all of the following information as appropriate and deemed necessary by the director for a given corrective action management unit, after considering the characteristics of the unit, volume of wastes which will remain in place after closure, potential for releases from the corrective action management unit, physical and chemical characteristics of the wastes, hydrogeological and other relevant environmental conditions at the facility which may influence the migration of any potential or actual releases, and potential for exposure of humans and environmental receptors if releases were to occur from the unit:

(i) The requirements for excavation, removal, treatment, and containment of the wastes.

(ii) The requirements for removal and decontamination of equipment, devices, and structures used in corrective action management unit-eligible waste management activities within the corrective action management unit.

(iii) For areas in which wastes will remain in place after closure of the corrective action management unit, the requirements for capping these areas. If the waste remaining in the corrective action management unit after closure has constituent concentrations at or above remedial levels or goals applicable to the site, the unit shall be provided with a final cover that is designed and constructed to meet the following performance criteria, unless the director determines that modifications to the requirements of this subparagraph are necessary to facilitate treatment or the performance of the unit:

(A) Provide long-term minimization of migration of liquids through the closed unit.

(B) Function with minimum maintenance.

(C) Promote drainage and minimize erosion or abrasion of the cover.

(D) Accommodate settling and subsidence so that the cover's integrity is maintained.

(E) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

(g) The postclosure requirements as necessary to protect human health and the environment, including, for areas in which wastes will remain in place, monitoring and maintenance activities and the frequency at which the activities shall be performed to ensure the integrity of any cap, final cover, or other containment system.

(13) The director may adjust the treatment level or method in subrule (12)(d) of this rule to a higher or lower level, based on 1 or more of the following factors, provided the adjusted level or method is protective of human health and the environment:

(a) The technical impractability of treatment to the levels or by the methods in subrule (12)(d) of this rule.

(b) The levels or methods in subrule (12)(d) of this rule would result in concentrations of principal hazardous constituents 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 subrule (12)(d) of this rule 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 subrule (12)(d) of this rule.

(e) The long-term protection offered by the engineering design of the corrective action management unit and related engineering controls where 1 of the following conditions are met:

(i) The treatment standards of subrule (12)(d) of this rule are substantially met and the principal hazardous constituents in the waste or residuals are of very low mobility.

(ii) Cost-effective treatment has been used and the corrective action management unit meets the liner and leachate collection requirements for new land disposal units in part 6 of these rules.

(iii) After review of appropriate treatment technologies, the director determines that cost-effective treatment is not reasonably available, and the corrective action management unit meets the liner and leachate collection requirements for new land disposal units in part 6 of these rules.

(iv) The cost-effective treatment has been used and the principal hazardous constituents in the treated wastes are of very low mobility.

(v) After review of the 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 corrective action management unit meets or exceeds the liner standards for new, replacement, or laterally expanded corrective action management units in subrule (12)(c) of this rule, or the corrective action management unit provides substantially equivalent or greater protection.

(14) The treatment required by the treatment standards of this rule shall be completed before, or within a reasonable time after, placement in the corrective action management unit. For the purposes of determining whether wastes placed in corrective action management units have been treated to site-specific treatment standards and treatment completed, 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.

(15) Corrective action management units that are used for storage or treatment only are units in which waste will not remain after closure. These corrective action management units shall be designated pursuant to all of the requirements of this rule, except as follows:

(a) Corrective action management units that are used for storage or treatment only and that operate pursuant to the time limits established in 40 C.F.R. §§264.554(d)(1)(iii), (h), and (i), are subject to the requirements for staging piles in 40 C.F.R. §§264.554(d)(1)(i) and (ii), (d)(2), (e), (f), (j), and (k), which are adopted by reference in R 299.9638, instead of the performance standards and requirements for corrective action management units in subrules (10) and (12)(c) to (f) of this rule.

(b) Corrective action management units that are used for storage or treatment only and that do not operate pursuant to the time limits established in 40 C.F.R. §§264.554(d)(1)(iii), (h), and (i) shall operate pursuant to a time limit established by the director, that is no longer than necessary to achieve a timely remedy selected for the waste and are subject to the requirements for staging piles in 40 C.F.R. §§264.554(d)(1)(i) and (ii), (d)(2), (e), (f), (j), and (k) instead of the performance standards

and requirements for corrective action management units in subrules (10) and (12)(d) to (f) of this rule.

(16) Corrective action management units into which wastes are placed where all wastes have constituent levels at or below remedial levels or goals applicable to the site may comply with the requirements for liners in subrule (12)(c) of this rule, caps in subrule (12)(f)(iii) of this rule, groundwater monitoring requirements in subrule (12)(e) of this rule, or for treatment or storage corrective action management units, the design standards of subrule (15) of this rule.

(17) The director shall provide public notice and a reasonable opportunity for public comment before designating a corrective action management unit. The notice shall include the rationale for any proposed adjustments under subrule (13) of this rule to the treatment standards in subrule (12)(d) of this rule.

(18) Notwithstanding any other provision of this rule, the director may impose additional requirements as necessary to protect human health and the environment.

(19) The incorporation of a corrective action management unit into an existing license shall be approved by the director pursuant to R 299.9519 and R 299.9520.

(20) The designation of a corrective action management unit does not change the department's existing authority to address environmental protection standards, media-specific points of compliance to be applied to remediation at a facility, or other remedy selection decisions.

R 299.9636 Temporary unit requirements.

Rule 636. (1) For the purposes of implementing corrective action remedies under part 111 of the act and these rules or implementing remedies at facilities that are not subject to corrective action under part 111 of the act and these rules, the director may designate tank or container storage units used for the treatment or storage of remediation wastes as temporary units. A temporary unit shall be located within the contiguous property under the control of the owner or operator where the wastes to be managed in the temporary unit originated. In establishing standards for temporary units, the director shall consider all of the following factors:

(a) The length of time the unit will be in operation.

(b) The type of unit.

(c) The volume of waste to be managed.

(d) The physical and chemical characteristics of the wastes to be managed in the unit.

(e) The potential for releases from the unit.

(f) The hydrogeological and other relevant environmental conditions at the facility which may influence the migration of any potential releases.

(g) The potential for exposure of humans and environmental receptors if a release were to occur from the unit.

(2) The director may allow the use of alternate design, operating, and closure standards for temporary units provided all of the following requirements are met:

(a) The temporary unit is located within the facility boundary.

(b) The temporary unit is used only for the treatment or storage of remediation wastes.

(c) The alternate standards are protective of human health and the environment.

(3) The director shall specify all of the following information in the license or order for each temporary unit:

(a) The length of time a temporary unit will be allowed to operate shall be not greater than 1 year.

(b) The design, operating, and closure requirements for the unit.

(4) The director may extend the operational period of the temporary unit 1 time, for a period of no longer than 1 year beyond the time period originally specified in the license or order, provided that all of the following requirements are met:

(a) The continued operation of the unit will not pose a threat to human health and the environment.

(b) The continued operation of the unit is necessary to ensure timely and efficient implementation of remedial actions at the facility.

(5) The incorporation of a temporary unit or a time extension for a temporary unit into an existing license shall be requested and approved by the director in accordance with R 299.9519 and R 299.9520.

(6) The director shall document the rationale for designating a temporary unit and for granting time extensions for temporary units and make the documentation available to the public.

R 299.9637 Hazardous waste munitions and explosives storage requirements.

Rule 637. (1) Owners or operators of storage facilities that store munitions and explosive hazardous wastes shall comply with the requirements of 40 C.F.R. part 264, subpart EE.

(2) The provisions of 40 C.F.R. part 264, subpart EE are adopted by reference in R 299.11003. For the purposes of this adoption, the word "director" shall replace the words "regional administrator," the word "R 299.9607" shall replace the words "40 C.F.R. part 264, subpart D," the word "R 299.9203(5)" shall replace the words "40 C.F.R. §261.3(d)," the word "R 299.9613" shall replace the words "40 C.F.R. part 264, subpart G," and the words Part 7 of the rules promulgated pursuant to the act" shall replace the words "40 C.F.R. part 264, subpart H."

R 299.9638 Staging pile requirements.

Rule 638. (1) Owners or operators of staging piles shall comply with the provisions of 40 C.F.R. §264.554, except §264.554(l).

(2) Staging piles shall be designated by the director in accordance with the requirements of 40 C.F.R. §264.554.

(3) Owners or operators that wish to modify an order to incorporate a staging pile or a staging pile operating term extension shall follow the terms of the order and the applicable provisions of part 5 of these rules.

(4) The provisions of 40 C.F.R. §264.554, except §264.554(l) are adopted by reference in R 299.11003. For the purposes of this adoption, the word "R 299.9212" shall replace the words "§261.21 or §261.23."

R 299.9639 Disposal of corrective action management unit-eligible waste in hazardous waste landfills.

Rule 639. (1) The director with regulatory oversight at the location where the cleanup is taking place may approve the placement of corrective action management unit-eligible waste in hazardous waste landfills not located at the site from which the waste originated, without the waste meeting the requirements of 40 C.F.R. part 268, if all of the following conditions are met:

(a) The waste meets the definition of corrective action management unit-eligible waste in R 299.9102.

(b) The director with regulatory oversight at the location where the cleanup is taking place identifies principal hazardous constituents in such wastes, pursuant to R 299.9635(12)(d), and requires that such principal hazardous constituents are treated to any of the following standards specified for corrective action management unit-eligible waste:

(i) The treatment standards in R 299.9635(12)(d).

(ii) The treatment standards adjusted pursuant to R 299.9635(13)(a), (c), (d), or (e)(i).

(iii) The treatment standards adjusted pursuant to R 299.9635(13)(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.

(c) The hazardous waste landfill receiving the corrective action management unit-eligible waste shall meet all of the following requirements:

(i) Have an operating license issued under part 111 of the act and these rules or, if out-of-state, have a comparable enforceable mechanism issued under the regulations governing the receiving landfill.

(ii) Meet the requirements for new landfills in part 6 of these rules or, if out-of-state, meet comparable requirements in the regulations governing the receiving landfill.

(iii) Be authorized to accept corrective action management unit-eligible waste.

(2) The person seeking approval for disposal of corrective action management unit-eligible waste shall provide sufficient information to enable the director with regulatory oversight at the location where the cleanup is taking place to approve placement of the waste pursuant to subrule (1) of this rule. The information required pursuant to R 299.9635(11) for corrective action management unit applications shall be provided, unless it is not reasonably available.

(3) The director with regulatory oversight at the location where the cleanup is taking place shall provide public notice and a reasonable opportunity for public comment before approving corrective action management unit-eligible waste for placement in an off-site licensed hazardous waste landfill, or, if out-of-state, in a hazardous waste landfill with a comparable enforceable mechanism issued under the governing regulations, consistent with the requirements for corrective action management unit approval in R 299.9635(17). The approval shall be specific to a single remediation.

(4) Applicable hazardous waste management requirements in part 6 of these rules, including recordkeeping requirements to demonstrate compliance with treatment standards approved under R 299.9635 and this rule, or, if out-of-state, comparable requirements, for corrective action management unit-eligible waste shall be incorporated into the receiving facility license or, if out-of-state, the comparable enforceable mechanism through issuance or modification, providing notice and an opportunity for comment and a hearing. A landfill may not receive hazardous corrective action management unit-eligible waste under this rule unless its operating license or comparable enforceable mechanism specifically authorizes receipt of such waste.

(5) With respect to each remediation activity, corrective action management unit-eligible waste shall not be placed in an off-site landfill authorized to receive the waste pursuant to subrule (4) of this rule until all of the following conditions have been met:

(a) The owner or operator of the landfill notifies the director responsible for oversight of the landfill and persons on the facility mailing list of his or her intent to receive corrective action management unit-eligible waste pursuant to this rule. The notice shall identify the source of the remediation waste, the principal hazardous constituents in the waste, and the treatment requirements.

(b) Persons on the facility mailing list may provide comments, including objections to the receipt of the corrective action management unit-eligible waste, to the director within 15 days of notification.

(c) The director may object to the placement of the corrective action management unit-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.

(d) Corrective action management unit-eligible wastes may not be placed in the landfill until the director has notified the facility owner or operator that he or she does not object to its placement.

(e) If the director objects to the placement or does not notify the facility owner or operator that he or she has chosen not to object, the facility may not receive the waste until the objection has been resolved, or the owner or operator obtains an operating license or, if out-of-state, a comparable enforceable mechanism, modification in accordance with R 299.9519 or, if out-of-state, the governing requirements, specifically authorizing receipt of the waste.

(f) As part of the operating license or, if out-of-state, a comparable enforceable mechanism, issuance or modification process in subrule (4) of this rule, the director may modify, reduce, or

eliminate the notification requirements of this subrule as they apply to specific categories of corrective action management unit-eligible waste, based on minimal risk.

(6) Generators of corrective action management unit-eligible wastes sent off-site to a hazardous waste landfill under this rule shall comply with 40 C.F.R. §268.7(a)(4).

(7) Off-site facilities treating corrective action management unit-eligible wastes to comply with this rule shall comply with the requirements of 40 C.F.R. §268.7(a)(4), or if out-of-state, the requirements governing such wastes, except that the certification shall be with respect to the treatment requirements of subrule (1)(b) of this rule or, if out-of-state, the governing treatment requirements.

(8) For the purposes of this rule only, the "design of the corrective action management unit" in R 299.9635(13)(e) means design of the licensed hazardous waste landfill.

R 299.9640 Options for incinerators, cement kilns, and lightweight aggregate kilns to minimize emissions from startup, shutdown, and malfunction events.

Rule 640. (1) Owners and operators of licensed incinerators, cement kilns, lightweight aggregate kilns, solid fuel boilers, liquid fuel boilers, or hydrochloric acid production furnaces may request that the director address operating license conditions that minimize emissions from startup, shutdown, and malfunction events under any of the options in 40 C.F.R. §270.235(a) when requesting removal of or operating license conditions that are no longer applicable according to R 299.9623(2) or R 299.9808(4).

(2) Owners and operators of interim status incinerators, cement kilns, lightweight aggregate kilns, solid fuel boilers, liquid fuel boilers, or hydrochloric acid production furnaces operating under parts 6 and 8 of these rules 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 a notification of compliance documenting compliance with 40 C.F.R. part 63, subpart EEE:

(a) The owner or operator continues to comply with the emission standards and operating requirements of parts 6 and 8 of these rules relevant to control of emissions from startup, shutdown, and malfunction events. Those standards and requirements only apply during startup, shutdown, and malfunction events.

(b) The owner or operator is exempt from the standards of parts 6 and 8 of these rules 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 pursuant to 40 C.F.R. §63.1206(c)(2) has been approved by the department pursuant to 40 C.F.R. §63.1206(c)(2)(ii).

(3) When an owner or operator of an interim status incinerator, cement kiln, or lightweight kiln operating under parts 6 and 8 of these rules submits an operating license application to the director, the owner or operator may request that the director control emissions from startup, shutdown, and malfunction events under subrule (1) of this rule.

(4) Hazardous waste incinerators, cement kilns, lightweight aggregate kilns, solid fuel boilers, liquid fuel boilers, or hydrochloric acid production furnaces that become subject to the licensing requirements of these rules after October 12, 2005, shall control emissions of toxic compounds during startup, shutdown, and malfunction events in accordance with 40 C.F.R. §270.235(c).

(5) The provisions of 40 C.F.R. §270.235(a) and (c) are adopted by reference in R 299.11003. For the purposes of this adoption, the word "permit" shall be replaced with "operating license," and the references to "264.340(b)" shall be replaced with "R 299.9623(2)," "266.100(b)" replaced with "R 299.9808(4)," and "270.41(a)" and "270.42" replaced with "R 299.9519."

PART 7. FINANCIAL CAPABILITY

R 299.9701 Applicability; definitions.

Rule 701. (1) Except as specified in subrule (2) of this rule, the requirements of this part apply to all facilities which treat, store, or dispose of hazardous waste or which accepted hazardous waste for disposal after November 19, 1980.

(2) States and the federal government are exempt from the requirements of this part.

(3) The definitions of terms contained in the provisions of 40 C.F.R. §264.141 are adopted by reference in R 299.11003.

R 299.9702 Cost estimate for closure and postclosure care.

Rule 702. (1) The owner or operator shall comply with the requirements of 40 C.F.R. §§264.142 and 264.144 regarding written cost estimates for closure and postclosure care.

(2) The provisions of 40 C.F.R. §§264.142 and 264.144 are adopted by reference in R 299.11003.

R 299.9703 Financial assurance for closure and postclosure care.

Rule 703. (1) The owner or operator of each facility shall establish financial assurance for closure of the facility by utilizing the options specified in R 299.9704 to R 299.9709. The owner or operator of each disposal facility shall establish financial assurance for postclosure care of the facility utilizing the options specified in R 299.9704 to R 299.9709. An owner or operator of a new facility shall submit these documents to the director or his or her designee not less than 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. An owner or operator shall submit all revisions and renewals of the documents to the director within 60 days of the revision or renewal.

(2) An owner or operator may satisfy the requirements of this rule by establishing more than 1 financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds, letters of credit, certificates of deposit and time deposit accounts, and insurance. The mechanisms shall be as specified in this part, 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 and postclosure cost estimate. The director may use any or all of the mechanisms to provide for closure and postclosure care of the facility.

(3) An owner or operator may use a financial assurance mechanism specified in this part to meet the requirements of this rule for more than 1 facility. Evidence of financial assurance submitted to the director shall include a list showing, for each facility, the site identification number, name, address, and the amount of funds for closure and postclosure assured by the mechanism. If the facilities covered by the mechanism are in more than 1 EPA region, identical evidence of financial assurance shall be submitted to, and maintained with, the regional administrators of all such EPA regions. The amount of funds available through the mechanism shall be not 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 and postclosure 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.

(4) An owner or operator may satisfy the requirements for financial assurance for both closure and postclosure care for one or more facilities by using a trust fund, surety bond, letter of credit, certificate of deposit and time deposit account, or insurance that meets the requirements of this part

for both closure and postclosure care. The amount of funds available through the mechanism shall not be 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 postclosure care.

(5) Within 60 days after receiving certifications from the owner or operator and an independent registered professional engineer that closure has been accomplished in accordance with the closure plan, or that the postclosure care period has been completed for a hazardous waste disposal unit in accordance with the approved postclosure plan, the director shall notify the owner or operator, in writing, that he or she is no longer required by this section to maintain financial assurance for closure of the particular facility or postclosure care of the particular unit, unless the director has reason to believe that closure or postclosure care has not been in accordance with the approved plan. The director shall provide the owner or operator with a detailed written statement of any such reason to believe that closure or postclosure care has not been in accordance with the approved plan.

(6) An owner or operator shall notify the director, by certified mail, of the commencement of a voluntary or involuntary proceeding under the bankruptcy provisions of Public Law 95-598, 11 U.S.C. §§1 to 151302, naming the owner or operator as debtor, within 10 days after commencement of the proceeding.

(7) An owner or operator who fulfills the requirements of this rule by obtaining a trust fund, surety bond, letter of credit, certificate of deposit or time deposit account, 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, a suspension or revocation of the authority of the trustee institution to act as trustee, or a suspension or revocation of the authority of the institution issuing the surety bond, letter of credit, certificate of deposit or time deposit account, 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.

(8) The director may replace all or part of the requirements of this rule with alternative requirements for financial assurance if the director does all of the following:

(a) Prescribes alternative requirements for the hazardous waste management unit under 40 C.F.R. §§264.90(f) or 264.110(c), or both, or 265.90(f) or 265.110(d), or both.

(b) Determines that it is not necessary to apply the requirements of this rule because the alternative financial assurance requirements will protect human health and the environment.

(c) Specifies the alternative financial assurance requirements in an operating license or enforceable document.

(9) The provisions of 40 C.F.R. §§264.90(f), 264.110(c), 265.90(f), and 265.110(d) are adopted by reference in R 299.11003.

R 299.9704 Trust fund.

Rule 704. (1) An owner or operator may satisfy the financial assurance requirements of R 299.9703 by establishing a trust fund for closure or postclosure, or both, which conforms to the requirements of this rule. The trustee shall be a bank or other financial institution which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency, and the trust agreement shall be executed on a form approved by the director.

(2) The trust fund shall be funded at 100% of the closure and postclosure cost estimate approved at the time of execution. Additional payments to the trust fund shall be made by the owner or operator to maintain 100% funding when the closure or postclosure cost estimates, or both, are increased.

(3) If the value of the trust fund is more than the total amount of the current closure or postclosure cost estimate, or both, the owner or operator may submit a written request to the director for release of the amount in excess of the current closure or postclosure cost estimate.

(4) If an owner or operator substitutes other financial assurance, as specified in this part, for all or

part of the trust fund, he or she may submit a written request to the director for release of the amount in excess of the current closure or postclosure cost estimate covered by the trust fund.

(5) Within 60 days after receiving a request from the owner or operator for release of funds as specified in subrules (3) or (4) of this rule, the director shall instruct the trustee to release to the owner or operator such funds as the director specifies in writing.

(6) After beginning partial or final closure, an owner or operator or any other person authorized to perform closure, partial closure, or postclosure care may request reimbursements for closure, partial closure, or postclosure expenditures by submitting itemized bills to the director. The owner or operator may request reimbursement 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 closure, partial closure, or postclosure care activities, the director shall determine whether the closure, partial closure, or postclosure care expenditures, or both, are in accordance with the closure plan or otherwise justified, and, if so, he or she shall instruct the trustee to make reimbursement in such amounts as the director specifies in writing. If the director does not instruct the trustee to make such reimbursements, the director shall provide the owner or operator with a detailed written statement of reasons.

(7) If the director has reason to believe that the cost of closure or postclosure care, or both, will be significantly more than the value of the trust fund, the director may withhold reimbursement of such amounts as he or she deems prudent until he or she determines, in accordance with R 299.9703(6), that the owner or operator is no longer required to maintain financial assurance for closure or postclosure care, or both.

(8) During the period of postclosure 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 postclosure care.

(9) The director shall agree to termination of the trust when an owner or operator substitutes alternate financial assurance as specified in this part and the director releases the owner or operator from the requirements of this part in accordance with R 299.9703(5).

(10) If the director issues a notice of violation or other order to the owner or operator alleging violation of closure or postclosure requirements, or both, the director may, after providing the owner or operator 7 days notice and opportunity for hearing, access the funds in the trust to correct the violations, complete closure, and maintain the facility in accordance with the approved plans.

R 299.9705 Surety bond guaranteeing performance of closure and/or postclosure care.

Rule 705. (1) An owner or operator may satisfy the financial assurance requirements of R 299.9703 by obtaining a surety bond which is executed on a form approved by the director and which conforms to the requirements of this rule. The surety company issuing the bond shall, at a minimum, satisfy both of the following requirements:

(a) The surety company shall be among those listed as acceptable sureties on federal bonds in circular 570 of the United States department of the treasury.

(b) The surety company shall be independent, separate, and unrelated to the owner or operator.

(2) The bond shall guarantee that the owner or operator will do either of the following:

(a) Perform final closure or postclosure care in accordance with the closure or postclosure plan and other requirements of the operating license for the facility when required to do so.

(b) 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, provide alternate financial assurance as specified in this part and obtain the director's written approval of the assurance provided.

(3) Under the terms of the bond, the surety shall become liable on the bond obligation under the following circumstances:

(a) When the owner or operator fails to perform as guaranteed by the bond.

(b) Following issuance of a notice of violation or other order by the director alleging that the owner or operator has failed to perform final closure or postclosure care, or both, in accordance with the closure and postclosure plans and other operating license requirements when required to do so and after providing the owner or operator 7 days notice and an opportunity for a hearing.

(4) The penal sum of the bond shall be in an amount at least equal to the current closure and postclosure cost estimates.

(5) When the current closure or postclosure cost estimate, or both, increases to an amount more 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 or postclosure cost estimate, or both, and submit evidence of such increase to the director or obtain other financial assurance as specified in this part. When the current closure or postclosure cost estimate decreases, the penal sum may be reduced to the amount of the current closure or postclosure cost estimate following written approval by the director.

(6) 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 shall 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.

(7) The owner or operator may cancel the bond if the director has given prior written consent. The director shall provide such written consent when either of the following occurs:

(a) An owner or operator substitutes alternate financial assurance as specified in this part.

(b) The director releases the owner or operator from the requirements of this part in accordance with R 299.9703(5).

(8) The surety shall not be liable for deficiencies in the performance of closure or postclosure care, or both, by the owner or operator after the director releases the owner or operator from the requirements of this part in accordance with R 299.9703(5).

(9) Upon receipt of a notice of cancellation of the bond from the surety, the owner or operator shall obtain alternate financial assurance approved by the director within 60 days. If the owner or operator fails to so provide, the director may issue a notice of violation or other order rendering the surety liable on the bond obligation.

R 299.9706 Letter of credit.

Rule 706. (1) An owner or operator may satisfy the requirements of this part by obtaining an irrevocable letter of credit which conforms to the requirements of this rule and which is executed on a form approved by the director. The issuing institution shall be a bank or financial institution 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 letter of credit shall include all of the following information:

(a) The site identification number.

(b) Name and address of the facility.

(c) The amount of funds assured for closure or postclosure care of the facility by the letter of credit.

(3) 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 will be automatically extended for a period of at least 1 year unless, not less than 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.

(4) The letter of credit shall be issued in an amount at least equal to the current closure or

postclosure cost estimate, or both, except as provided in R 299.9703(2).

(5) When the current closure or postclosure cost estimate, or both, increases to an amount more 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 or postclosure cost estimate and submit evidence of such increase to the director or obtain other financial assurance as specified in this part to cover the increase. When the current closure or postclosure cost estimate decreases, the amount of the credit may be reduced to the amount of the current closure or postclosure cost estimate following written approval by the director.

(6) The director may draw on the letter of credit to correct violations, complete closure, and maintain the facility pursuant to approved plans after doing both of the following:

(a) Issuing a notice of violation or other order to the owner or operation which alleges that the owner or operator has failed to perform final closure or postclosure care, or both, pursuant to the closure and postclosure plans and other license requirements when required.

(b) Providing the owner or operator with 7 days notice and opportunity for hearing.

(7) If the owner or operator does not establish alternate financial assurance as specified in this part 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, then 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 this part and obtain written approval of such assurance from the director.

(8) The director shall return the letter of credit to the issuing institution for termination when either of the following occurs:

(a) An owner or operator substitutes alternate financial assurance as specified in this part.

(b) The director releases the owner or operator from the requirements of this part pursuant to R 299.9703(5).

R 299.9707 Certificate of deposit or time deposit account.

Rule 707. (1) An owner or operator may satisfy the requirements of R 299.9703 by placing funds in the amount of the current approved closure or postclosure cost estimate in an insured, negotiable certificate of deposit or time deposit account held by a bank or other financial institution regulated and examined by a federal or state agency. The value of the certificate of deposit or time deposit account shall be fully insured by an agency of the United States government, unless otherwise approved by the director.

(2) The certificate or account shall be in the sole name of the director with a maturity of not less than 6 months.

(3) The owner or operator shall execute an agreement with the director which identifies the reasons for which the director may cash the certificate of deposit or time deposit account. The agreement shall be executed on a form approved by the director.

(4) A certificate or time deposit account of less than a 1-year maturity shall provide for automatic renewal. An owner or operator shall renew or replace a certificate of deposit or time deposit account of 1 year or more not less than 60 days before the maturity date.

(5) The certificate of deposit or time deposit account shall be issued in an amount at least equal to the current approved closure or postclosure cost estimate, except when used with other mechanisms as provided in R 299.9703(2).

(6) When the current approved closure or postclosure cost estimate increases to an amount more than the value of the certificate of deposit or time deposit account, the owner or operator, within

60 days after the increase is approved or issued by the director, shall either cause the amount of the certificate of deposit or time deposit account to be increased so that it at least equals the current approved closure or postclosure cost estimate and submit evidence of such increase to the director or obtain other financial assurance as specified in this part to cover the increase. During the period of postclosure care, the director may approve a decrease in the amount of the certificate of deposit or time deposit account if the owner or operator demonstrates to the director that the amount exceeds the remaining cost of postclosure care after inflation is considered.

(7) The director may cash the certificate of deposit or withdraw funds from the time deposit account to correct the violations, complete closure, and maintain the facility in accordance with the approved plans after doing both of the following:

(a) Issuing a notice of violation or other order to the owner or operator which alleges that the owner or operator has failed to perform closure or postclosure care in accordance with the closure or postclosure plan or other license requirements.

(b) Providing the owner or operator 7 days notice and opportunity for hearing.

(8) If the owner or operator elects not to continue the use of the certificate of deposit or time deposit account to provide financial assurance as required, or any portion thereof, the owner or operator shall provide acceptable financial assurance to the director 60 days before the maturity date of the certificate of deposit or time deposit account. If the owner or operator fails to so provide, the director may cash the certificate of deposit or time deposit account and place the funds in a state treasury account. The director may release such funds to the owner or operator at such time as the owner or operator provides acceptable replacement financial assurance.

(9) The director shall release funds held in a certificate of deposit or time deposit account to the owner or operator when the owner or operator substitutes alternate financial assurance as specified in this part or the director releases the owner or operator from the requirements of this part in accordance with R 299.9703(5).

R 299.9708 Closure or postclosure insurance.

Rule 708. (1) An owner or operator may satisfy the requirements of R 299.9703 by obtaining closure or postclosure insurance, or both, which conforms to the requirements of this rule and by submitting both of the following to the director:

(a) A certificate of insurance which uses wording approved by the director.

(b) A certified true and complete copy of the insurance policy.

(2) An owner or operator of a new facility shall submit the certificate of insurance and insurance policy to the director not less than 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.

(3) The insurer shall satisfy all of the following requirements:

(a) The insurer shall be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in the state of Michigan.

(b) The insurer shall have a minimum of $7,000,000.00 of unimpaired surplus funds.

(c) The insurer shall assume financial responsibility for the accepted risk, pursuant to the terms of the policy, using its own pool of resources that is independent, separate, and unrelated to that of the owner or operator.

(4) The closure or postclosure insurance policy shall be issued for a face amount at least equal to the current closure or postclosure cost estimate, except as provided in R 299.9703(2). 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.

(5) The closure insurance policy shall guarantee that funds will be available to close the facility

when final closure occurs. The postclosure insurance policy shall guarantee that funds will be available to provide postclosure care of the facility when the postclosure period begins. 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 person or persons as the director specified.

(6) After beginning partial or final closure, an owner or operator or any other person authorized to perform closure or postclosure care may request reimbursements for closure or postclosure 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 or postclosure activities, the director shall determine if the expenditures are in accordance with the closure or postclosure plan or otherwise justified, and, if so, he or she shall instruct the insurer to make reimbursement in such amounts as the director specified in writing. If the director has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly more than the face amount of the policy, the director may withhold reimbursement of such amounts as he or she deems prudent until he or she determines, in accordance with R 299.9703(5), that the owner or operator is no longer required to maintain financial assurance for closure of the facility. If the director does not instruct the insurer to make such reimbursements, then the director shall provide the owner or operator with a detailed written statement of reasons.

(7) 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 subrule (12) of this rule. In addition, failure to pay the premium without substitution of alternate financial assurance as specified in this part shall constitute a significant violation of these rules and shall warrant such other remedy as the director deems necessary. Such violation will 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.

(8) 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 if such consent is not unreasonably refused.

(9) The policy shall provide that the insurer shall 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, then 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; however, the policy shall unconditionally provide for all of the following:

(a) That if the owner or operator fails to renew the policy or provide alternate financial assurance as approved by the director not less than 60 days before the expiration date of the policy, then the insurer shall immediately pay, to the director, the full amount of closure and postclosure coverage under the policy if requested, in writing, by the director before the expiration date of the policy.

(b) That cancellation, termination, or failure to renew shall not occur 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.

(c) That cancellation, termination, or failure to renew shall not occur, and the policy shall remain in full force and effect, if, on or before the date of expiration, any of the following occurs:

(i) The director deems the facility abandoned.

(ii) The operating license is terminated or revoked or a new operating license is denied.

(iii) Closure is ordered by the director, a United States district court, or other court of competent jurisdiction.

(iv) The owner or operator is named as debtor in a voluntary or involuntary proceeding under the bankruptcy provisions of Public Law 95-598 11 U.S.C. §§1 to 151302.

(v) The premium due is paid.

(10) The policy shall unconditionally provide that the insurer shall, after the hearing, immediately pay to the director any amount requested by the director up to the full value of the appropriate closure or postclosure policy to correct the closure or postclosure violations following issuance of a notice of violation or other order by the director which does both of the following:

(a) Alleges that the owner or operator has failed to perform closure or postclosure care, or both, in accordance with the closure plan, postclosure plan, or other requirements of part 111 of the act, these rules, or the operating license.

(b) Provides 7 days notice and opportunity for hearing.

(11) If the current closure or postclosure cost estimate increases to an amount more than the face amount of the policy, then 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 or postclosure cost estimate and submit evidence of such increase to the director or obtain other financial assurance as specified in this part to cover the increase. If the current closure or postclosure cost estimate decreases, then the face amount may be reduced to the amount of the current closure or postclosure cost estimate following written approval by the director.

(12) The director shall give written consent to the owner or operator that the owner or operator may terminate the insurance policy when either of the following occurs:

(a) An owner or operator substitutes alternate financial assurance as specified in this rule.

(b) The director releases the owner or operator from the requirements of this part in accordance with R 299.9703(5).

R 299.9709 Financial test and corporate guarantee for closure or postclosure.

Rule 709. (1) An owner or operator may satisfy the requirements of this part by demonstrating that he or she passes a financial test as specified in this rule. To pass this test, the owner or operator shall meet the criteria of either subdivision (a) or (b) of this subrule as follows:

(a) The owner or operator shall have all of the following:

(i) Two of the following 3 ratios:

(A) A ratio of total liabilities to net worth less than 2.0.

(B) A ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities of more than 0.1.

(C) A ratio of current assets to current liabilities of more than 1.5.

(ii) Net working capital and tangible net worth each not less than 6 times the sum of the current closure and postclosure cost estimates and any other obligations covered by a financial test.

(iii) Tangible net worth of not less than $10,000,000.00.

(iv) Assets in the United States amounting to not less than 90% of his or her total assets or not less than 6 times the sum of the current closure and postclosure cost estimates and any other obligations covered by a financial test.

(v) Total assets in Michigan of not less than $50,000,000.00, excluding the value of any land used for hazardous waste disposal or have total assets in Michigan which are not less than 6 times the sum of the approved closure and postclosure cost estimates for facilities subject to these rules, whichever is larger.

(b) The owner or operator shall have all of the following:

(i) A current rating for its senior unsecured debt of AAA, AA, A, or BBB, as issued by Standard and Poor's, or Aaa, Aa, A, or Baa as issued by Moody's.

(ii) Tangible net worth not less than 6 times the sum of the current closure and postclosure cost

estimates and any other obligations covered by a financial test.

(iii) Tangible net worth of not less than $10,000,000.00.

(iv) Assets located in the United States amounting to not less than 90% of his or her total assets or not less than 6 times the sum of the current closure and postclosure cost estimates and any other obligations covered by a financial test.

(v) Have total assets in Michigan of not less than $50,000,000.00, excluding the value of any land used for hazardous waste disposal, or have total assets in Michigan that are not less than six times the sum of the approved closure and postclosure cost estimates for facilities subject to these rules, whichever is larger.

(2) The phrase "current closure and postclosure cost estimates," as used in subrule (1) of this rule, means the cost estimates required under R 299.9702 and equivalent or substantially equivalent federal or state regulations. The phrase "other obligations covered by a financial test," as used in subrule (1) of this rule, means the financial assurance for solid waste management facilities under part 115 of the act and equivalent or substantially equivalent federal or state regulations, the financial assurance for injection wells under 40 C.F.R. part 144, the financial assurance for underground storage tanks under 40 C.F.R. part 280 and equivalent or substantially equivalent state regulations, the financial assurance for polychlorinated biphenol facilities regulated under 40 C.F.R. part 761 and equivalent or substantially equivalent state regulations, the financial assurance for remediation costs under part 201 of the act and equivalent federal or state regulations, and the fiinancial assurance for corrective action under R 299.9713 and equivalent or substantially equivalent federal or state regulations.

(3) To demonstrate that he or she meets this test, the owner or operator shall submit all of the following items to the director:

(a) A letter signed by the owner or operator's chief financial officer and worded as specified by the director.

(b) 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.

(c) A special report from the owner's or operator's independent certified public accountant to the owner or operator on comparison of the data presented in the chief financial officer's letter to the independently audited, year-end financial statements. The special report shall describe the agreed-upon procedures performed and related findings, including if there were any discrepancies found.

(4) An owner or operator of a new facility shall submit the items specified in subrule (3) of this rule to the director not less than 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal.

(5) After the initial submission of the items specified in subrule (3) of this rule, 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 items specified in subrule (3) of this rule.

(6) If the owner or operator no longer meets the requirements of subrule (1) of this rule, he or she shall send notice to the director of the intent to establish alternate financial assurance as specified in this part. 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 might no longer meet the requirements of subrule (1) of this rule, require reports of financial condition at any time from the owner or operator in addition to that information required of the owner or operator in subrule (3) of this rule. If the director finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of subrule (1) of this rule, the owner or operator shall provide alternate financial assurance as specified in this part within 30 days after notification of such

a finding.

(8) The director may disallow use of a financial test to meet the requirements of this part on the basis of qualifications in the opinion expressed by the independent certified public accountant in his or her report on examination of the owner's or operator's financial statements. An adverse opinion or a disclaimer of opinion will 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 this rule within 30 days after notification of the disallowance.

(9) The owner or operator is no longer required to submit the items specified in subrule (3) of this rule when one of the following occurs:

(a) An owner or operator substitutes alternate financial assurance as specified in this rule.

(b) The director releases the owner or operator from the requirements of this part in accordance with R 299.9703(5).

(10) An owner or operator may meet the requirements of this rule by obtaining a written guarantee, hereafter referred to as "corporate guarantee." The guarantor shall be the parent corporation of the owner or operator. The guarantor shall meet the requirements for owners or operators in subrules (1) to (8) of this rule and shall comply with the terms of the corporate guarantee. The wording of the corporate guarantee shall be identical to wording provided by the director. The corporate guarantee shall accompany the items sent to the director as specified in subrule (3) of this rule. The terms of the corporate guarantee shall provide for all of the following:

(a) That if the owner or operator fails to perform final closure or postclosure care of a facility covered by the corporate guarantee in accordance with the closure and postclosure plans and other operating license requirements when required to do so, the guarantor shall do so or establish a trust fund as specified in R 299.9704 in the name of the owner or operator.

(b) 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 shall 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.

(c) If the owner or operator fails to provide alternate financial assurance as specified in this part and obtain the written approval of such alternate assurance from the director within 90 days after receipt by the owner or operator and the director of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor shall provide such alternative financial assurance in the name of the owner or operator.

(d) In the case of corporations that are incorporated outside of Michigan, the guarantor shall identify and maintain a registered agent for service of process in Michigan.

R 299.9710 Liability requirements for treatment, storage, and disposal facilities.

Rule 710. (1) 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 and accidental occurrences arising from operations of the facility or group of facilities. The owner or operator shall have and maintain liability coverage for sudden and accidental occurrences in an amount not less than $1,000,000.00 per occurrence with an annual aggregate of not less than $2,000,000.00, exclusive of legal defense costs.

(2) An owner or operator of a surface impoundment, landfill, land treatment facility, or disposal miscellaneous unit which 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 an amount not less than $3,000,000.00 per occurrence with an annual aggregate of not less than

$6,000,000.00, exclusive of legal defense costs.

(3) An owner or operator shall demonstrate the existence of the required liability coverage through any of the following:

(a) Insurance as specified in subrule (6) of this rule.

(b) The financial test specified in subrule (7) of this rule.

(c) The financial test specified in subrule (8) of this rule.

(d) The corporate guarantee specified in subrule (9) of rule.

(e) The letter of credit specified in subrule (10) of this rule.

(f) The trust fund specified in subrule (11) of this rule.

(4) An owner or operator may demonstrate the existence of the required liability coverage through a combination of the financial mechanisms specified in subrule (3) of this rule, except that any combination shall not include more than 1 of the financial tests specified and shall not include both a financial test and corporate guarantee. The amounts of coverage shall total at least the minimum amounts required by this rule.

(5) If more than 1 financial mechanism is used to demonstrate the existence of the required liability coverage, then the owner or operator shall specify at least 1 financial mechanism as primary coverage and shall specify the other financial mechanisms as excess coverage.

(6) An owner or operator may satisfy the liability requirements of this rule by obtaining an insurance policy as follows:

(a) Each insurance policy shall be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or which is eligible to provide insurance as an excess or surplus lines insurer, in the state of Michigan.

(b) Each insurance policy shall be amended by attaching an endorsement on a form provided by the director. The owner or operator shall submit, to the director, a signed duplicate original of the endorsement, and, if requested by the director, a signed duplicate of the insurance policy.

(c) Each policy that is obtained to meet the requirements of this rule shall provide that cancellation, termination, or a material change to the policy that affects the coverages required by this rule shall not occur unless and until not less than 30 days' written notice of the cancellation, termination, or material change is first provided to the director. The notice shall be given no matter which party initiates the cancellation, termination, or material change and whether or not nonpayment of premium is involved.

(d) If the underlying policies required by subrules (1) and (2) of this rule do not provide sufficient limits of liability, the policy shall be amended by attaching an excess insurance endorsement on a form approved by the director.

(7) An owner or operator may satisfy the liability requirements of this rule by complying with the financial test requirements specified in the provisions of 40 C.F.R. §264.147(f). To demonstrate that he or she passes this test, the owner or operator shall submit all of the information required in 40 C.F.R. §264.147(f)(3) to the director. The words "regional administrator" in the provisions of 40 C.F.R. §264.151(g) shall be replaced with the word "director."

(8) An owner or operator may satisfy the liability requirements of this rule by complying with the financial test requirements specified in the provisions of R 299.9709 and both of the following provisions:

(a) The financial test criteria of R 299.9709 shall be modified as follows:

(i) In the provisions of R 299.9709(1)(a)(ii), net working capital and tangible net worth shall each be not less than 6 times the sum of the current closure and postclosure cost estimates, any other obligations covered by a financial test, and the amount of annual aggregate liability coverage.

(ii) In the provisions of R 299.9709(1)(a)(iv), assets in the United States shall be not less than 90% of the owner's or operator's total assets or not less than 6 times the sum of the current closure and

postclosure cost estimates, any other obligations covered by a financial test, and the amount of annual aggregate liability coverage.

(iii) In the provisions of R 299.9709(1)(b)(ii), tangible net worth shall be not less than 6 times the sum of the current closure and postclosure cost estimates, any other obligations covered by a financial test, and the amount of annual aggregate liability coverage.

(iv) In the provisions of R 299.9709(1)(b)(iv), assets in the United States shall be not less than 90% of the owner's or operator's total assets or not less than 6 times the sum of the current closure and postclosure cost estimates, any other obligations covered by a financial test, and the amount of annual aggregate liability coverage.

(b) To demonstrate that the owner or operator passes the financial test requirements of this subrule, the owner or operator shall submit all of the information required by the provisions of R 299.9709(3) to the director.

(c) If the owner or operator no longer meets the requirements of this subrule, then he or she shall obtain alternate liability coverage as specified in this rule. Evidence of alternate 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 financial test requirements of this subrule.

(9) An owner or operator may satisfy the liability requirements of this rule by obtaining a written guarantee for liability coverage, hereafter referred to as "corporate guarantee," as follows:

(a) The guarantor shall be the parent corporation of the owner or operator. The guarantor shall meet the requirements for owners or operators specified in subrule (7) or (8) of this rule and shall comply with the terms of the corporate guarantee.

(b) The corporate guarantee shall provide for all of the following:

(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, or both, accidental occurrences arising from the operation of facilities covered by the corporate guarantee, or fails to pay an amount agreed to in settlement of claims arising from, or alleged to have arisen from, such injury or damage, then the guarantor will satisfy the judgment or pay the settlement amount up to the limits of coverage.

(ii) The guarantor shall make payment of third-party liability awards and settlements upon presentation of a certification of a valid claim or a valid final court order that establishes a judgment against the owner or operator for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the facilities covered by the corporate guarantee.

(iii) The liability coverage shall not apply to the exclusions specified in the provisions of subrule (12) of this rule.

(iv) The corporate guarantee shall remain in force unless the guarantor sends a notice of cancellation, by certified mail, to the owner or operator and to the director. Cancellation shall 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.

(v) The corporate guarantee shall not be terminated unless the owner or operator obtains, and the director approves, alternate liability coverage as specified in this rule.

(vi) The guarantor shall obtain alternate liability coverage as specified in this rule in the name of the owner or operator, unless the owner or operator has done so, within 30 days after being notified by the director that the guarantor no longer meets the financial test criteria or that the guarantor is disallowed from continuing as guarantor, and within 120 days after the end of any fiscal year before termination of the guarantee in which the guarantor fails to meet the financial test criteria.

(c) The wording of the corporate guarantee shall be identical to the wording specified by the director.

(d) The corporate guarantee shall accompany the items sent to the director as specified in subrule (7) or (8) of this rule.

(e) If a corporation is incorporated outside of Michigan, then a guarantee may be used to satisfy the requirements of this rule only if the non-Michigan corporation has identified a registered agent for service of process in Michigan.

(f) The director shall agree to termination of the guarantee if either of the following occurs:

(i) The owner or operator or guarantor substitutes alternate financial assurance as specified in this rule.

(ii) The director releases the owner or operator from the liability requirements in accordance with the provisions of subrule (16) of this rule.

(10) An owner or operator may satisfy the liability requirements of this rule by obtaining an irrevocable letter of credit for liability coverage as follows:

(a) The issuing institution shall be a bank or financial institution which has the authority to issue letters of credit and which has its letter of credit operations regulated and examined by a federal or state agency.

(b) The letter of credit shall provide for both of the following:

(i) The financial institution shall deposit amounts designated by the trustee, up to the amount of the letter of credit, into a standby trust fund upon presentation of a sight draft.

(ii) The letter of credit shall be irrevocable and issued for a period of at least 1 year. The expiration date shall be automatically extended for a period of at least 1 year unless, not less than 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. The 120 days shall begin on the date when both the owner or operator and the director receive the notice, as evidenced by the return receipts.

(c) The wording of the letter of credit shall be identical to the wording specified by the director.

(d) The director shall agree to termination of the letter of credit when either of the following occurs:

(i) The owner or operator substitutes alternate financial assurance as specified in this rule.

(ii) The director releases the owner or operator from the liability requirements in accordance with the provisions of subrule (16) of this rule.

(e) An owner or operator who uses a letter of credit to satisfy the requirements of this rule shall establish a standby trust fund in accordance with both of the following provisions:

(i) The trustee shall be a bank or other financial institution which has the authority to act as trustee and which has its trust operations regulated and examined by a state or federal agency.

(ii) The trust fund shall provide for all of the following:

(A) The trustee shall satisfy third-party liability claims by drawing on the letter of credit and by making payments from the fund upon presentation of a certification of a valid claim or a valid final court order that establishes a judgment against the owner or operator for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the facilities covered by the trust fund.

(B) The liability coverage shall not apply to the exclusions specified in the provisions of subrule (12) of this rule.

(C) The trust shall be irrevocable and shall continue until terminated pursuant to the written agreement of the owner or operator, the trustee, and the director or until terminated by the trustee and the director if the owner or operator ceases to exist.

(D) The wording of the trust agreement shall be identical to the wording specified by the director.

(f) The director shall agree to termination of the standby trust if either of the following occurs:

(i) The owner or operator substitutes alternate financial assurance as specified in this rule.

(ii) The director releases the owner or operator from the liability requirements in accordance with

the provisions of subrule (16) of this rule.

(g) The owner or operator shall submit a copy of the letter of credit and a signed duplicate original of the standby trust agreement to the director.

(h) If the owner or operator does not establish alternate liability coverage as specified in this rule and obtain written approval of the alternate coverage 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, then the director shall notify the trustee and the trustee shall draw on the letter of credit and deposit the proceeds of the letter of credit into the standby trust fund.

(11) An owner or operator may satisfy the liability requirements of this rule by obtaining a trust fund for liability coverage as specified in the following provisions and submitting a signed duplicate original of the trust agreement to the director:

(a) The trustee shall be a bank or other financial institution which has the authority to act as trustee and which has its trust operations regulated and examined by a state or federal agency.

(b) The trust fund shall be funded for the full amount of liability coverage to be provided by the trust fund. After the trust fund is established, if the trust fund amount is reduced below the full amount of liability coverage to be provided by the trust fund, then the owner or operator shall make payment to the trustee to cause the value of the trust fund to at least equal the full amount of liability coverage to be provided by the trust fund. The payments shall be made before the anniversary date of the establishment of the fund.

(c) The trust fund shall provide for all of the following:

(i) The trustee shall make payment of third-party liability awards and settlements, up to the value of the fund, upon presentation of a certification of a valid claim or a valid final court order that establishes a judgment against the owner or operator for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the facilities covered by the trust fund.

(ii) The liability coverage shall not apply to the exclusions specified in the provisions of subrule (12) of this rule.

(iii) The trust shall be irrevocable and shall continue until terminated pursuant to the written agreement of the owner or operator, the trustee, and the director or until terminated by the trustee and the director if the owner or operator ceases to exist.

(d) The wording of the trust agreement shall be identical to the wording specified by the director.

(e) The director shall agree to termination of the trust if either of the following occurs:

(i) The owner or operator substitutes alternate financial assurance as specified in this rule.

(ii) The director releases the owner or operator from the liability requirements in accordance with the provisions of subrule (16) of this rule.

(12) The liability coverages provided by the corporate guarantee, letter of credit, and trust fund pursuant to the provisions of this rule shall not apply to any of the following categories of damages or obligations:

(a) Bodily injury or property damage for which the 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 which the owner or operator would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of the owner or operator pursuant to a worker's compensation, disability benefits, or unemployment compensation law or similar law.

(c) Bodily injury to an employee of the owner or operator arising from, and in the course of, employment by the owner or operator, or bodily injury to the spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of, employment by the owner

or operator. This exclusion applies whether the owner or operator may be liable as an employer or in any other capacity and applies to any obligation to share damages with or repay another person who must pay damages because of injury to the employee or the spouse, child, parent, brother, or sister of the employee.

(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 any of the following:

(i) Any property that is owned, rented, or occupied by the owner or operator.

(ii) Premises that are sold, given away, or abandoned by the owner or operator if the property damage arises out of any part of the premises.

(iii) Property that is loaned to the owner or operator.

(iv) Personal property in the care, custody, or control of the owner or operator.

(v) The part of real property on which the owner, operator, or any contractor or subcontractor who is working directly or indirectly on behalf of the owner or operator are performing operations, if the property damage arises out of these operations.

(13) An owner or operator shall notify the director, in writing, within 30 days, if any of the following conditions occur:

(a) A claim results in a reduction in the amount of financial responsibility for liability coverage provided by a financial mechanism authorized in subrule (3) of this rule.

(b) A certification of valid claim for bodily injury or property damages caused by a sudden or nonsudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and a third-party claimant for liability coverage pursuant to the provisions of this rule.

(c) A final court order that establishes a judgment for bodily injury or property damage caused by a sudden or nonsudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or a financial mechanism for liability coverage pursuant to the provisions of this rule.

(14) An owner or operator shall continuously provide liability coverage for a facility as required by this rule until certifications of closure of the facility as specified in the provisions of R 299.9613(3) are received by the director and the director notifies the owner or operator that the owner or operator is no longer required to maintain financial assurance for closure pursuant to the provisions of R 299.9703(5).

(15) The director may adjust the levels of financial responsibility required by this rule for the reasons specified in the provisions of 40 C.F.R. §264.147(c) and (d). Any adjustment to the level or type of coverage for a facility that has an operating license shall be treated as an operating license modification pursuant to the provisions of R 299.9519.

(16) Within 60 days after receiving certifications from the owner or operator and an independent registered 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 the owner or operator is no longer required by this rule 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.

(17) If all other hazardous waste management units at the facility which are subject to a liability coverage requirement under this rule are closed, or if the closure process under part 6 of these rules has been initiated for all other hazardous waste management units that are subject to a liability coverage requirement, then the director may replace all or part of that liability coverage requirement for a hazardous waste management unit with alternative requirements under R 299.9713 if the director does all of the following:

(a) Prescribes alternative requirements for the hazardous waste management unit under

40 C.F.R. §§264.90(f) or 264.110(c).

(b) Determines that it is not necessary to apply the requirements of this rule because the alternative financial assurance requirements will protect human health and the environment.

(c) Specifies the alternative requirements in an operating license or enforceable document.

(18) The provisions of 40 C.F.R. §§264.90(f), 264.110(d), 264.147(c), (d), and (f) and 264.151(g) are adopted by reference in R 299.11003.

R 299.9711 Financial capability requirements for transporters operating a transfer facility or group of transfer facilities.

Rule 711. (1) A transporter who operates a transfer facility or group of transfer facilities shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden and accidental occurrences arising from the operations of the facility or group of facilities. The transporter shall have and maintain liability coverage for sudden and accidental occurrences in an amount not less than $500,000.00 per occurrence, exclusive of legal defense costs. The requirement for liability coverage is in addition to any other insurance requirements of sections 3101 and 3102 of act 218. The transporter shall comply with the liability coverage requirements of this subrule by obtaining an insurance policy in accordance with the provisions of subrule (2) of this rule or by passing the financial test specified in the provisions of subrule (3) of this rule.

(2) Each insurance policy that is obtained by a transporter to fulfill the requirements of this rule shall be in compliance with all of the following provisions:

(a) The policy shall include a provision that the insurer notify the director 30 days before either of the following:

(i) Cancellation or termination of the insurance by either party for any reason.

(ii) A material change to the policy for any reason.

(b) The policy shall be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or which is eligible to provide insurance as an excess or surplus line insurer, in the state of Michigan.

(c) The deductible written into the policy shall not be more than 5% of the per occurrence limit of liability of the policy. If more than one policy is used to provide the coverage required by this rule, the total of all deductibles shall not be more than 5% of the total of the per occurrence limits of the policies used.

(d) The policy shall be amended by attaching an endorsement on a form provided by the director.

(3) A transporter may satisfy the liability coverage requirements of this rule by demonstrating that he or she passes a financial test as specified in this rule. To pass the test, the owner or operator shall meet the criteria of either subdivision (a) or (b) of this subrule as follows:

(a) A transporter shall comply with all of the following provisions:

(i) Have a net working capital and a tangible net worth which, for each, is not less than 6 times the amount of liability coverage to be demonstrated by the test.

(ii) Have a tangible net worth of not less than $10,000,000.00.

(iii) Have assets in the United States that amount to not less than 90% of his or her total assets or not less than 6 times the amount of liability coverage to be demonstrated by the test.

(b) A transporter shall comply with all of the following provisions:

(i) Have a current rating for its senior unsecured debt of AAA, AA, A, or BBB as issued by standard and poor's or Aaa, Aa, A, or Baa as issued by moody's.

(ii) Have tangible net worth of not less than $10,000,000.00.

(iii) Have a tangible net worth that is not less than 6 times the amount of liability coverage to be demonstrated by the test.

(iv) Have assets in the United States that amount to not less than 90% of his or her total assets or

not less than 6 times the amount of liability coverage to be demonstrated by the test.

(c) The phrase "amount of liability coverage" as used in this subrule refers to the annual aggregate amounts for which coverage is required pursuant to the provisions of subrule (1) of this rule.

(4) A transporter shall demonstrate the existence of the liability coverage required pursuant to this rule by submitting either of the following to the director:

(a) All information that is necessary to meet the financial test requirements of subrule (3) of this rule, as follows:

(i) A letter which is signed by the transporter's chief financial officer and which is worded as specified by the director.

(ii) A copy of the independent certified public accountant's report upon examining the transporter's financial statements for the latest completed fiscal year.

(iii) A special report from the transporter's independent certified public accountant to the transporter on comparison of the data presented in the chief financial officer's letter to the independently-audited, year-end financial statements. The special report shall describe the agreed-upon procedures performed and related findings, including whether or not there were any discrepancies found.

(b) An endorsement provided by the director which shows that the coverage required in this rule has been obtained by the transporter. The transporter shall submit a signed duplicate original of each insurance endorsement. If requested by the director, the transporter shall provide signed duplicate originals of all insurance policies that are needed to fulfill the requirements of this rule.

(5) After the initial submission of the items specified in subrule (4)(a) of this rule, the transporter shall send updated information to the director within 90 days after the close of each succeeding fiscal year. The information shall consist of all of the items specified in subrule (4)(a) of this rule.

(6) A transporter using insurance to satisfy the liability coverage requirements of this rule shall submit to the director the endorsement required under subrule (4)(b) of this rule for the renewal or replacement policy upon issuance of the renewal or replacement policy.

(7) If underlying policies that are required pursuant to the provisions of subrule (2) of this rule do not provide sufficient limits of liability, then the transporter shall amend the policy by attaching an excess liability insurance endorsement on a form provided by the director.

(8) If a transporter is using the financial test to demonstrate financial responsibility for liability coverage required pursuant to the provisions of this rule and no longer meets the requirements of subrule (3) of this rule, then he or she shall send notice to the director of the intent to obtain an insurance policy as specified in this rule. The transporter shall send the notice by certified mail within 90 days after the end of the fiscal year for which year-end financial data show that the transporter no longer meets the requirements of subrule (3) of this rule. The transporter shall obtain liability insurance within 120 days after the end of the fiscal year.

(9) The director may disallow the use of a financial test to meet the requirements of this rule on the basis of qualifications in the opinion expressed by the independent certified public accountant in his or her report upon examining the transporter's financial statements. An adverse opinion or disclaimer of opinion is cause for the disallowance of the use of a financial test to meet the requirements of subrule (1) of this rule. The director shall evaluate other qualifications on an individual basis. The transporter shall obtain an insurance policy as specified in this rule within 30 days after notification of the disallowance.

R 299.9712 Cost estimate for corrective action.

Rule 712. (1) The owner or operator of a facility who is required to perform corrective action pursuant to the provisions of part 111 of the act or these rules shall have a detailed written estimate, in current dollars, of the cost of performing corrective action at the facility in accordance with the provisions of R 299.9629.

(2) The cost estimate shall be based on the cost of hiring a third-party to complete the corrective action measures required pursuant to the provisions of R 299.9629.

(3) The cost estimate shall not incorporate any salvage value for the sale of hazardous wastes, facility structures or equipment, land or other facility assets.

(4) When preparing the cost estimate, the owner or operator shall not incorporate a zero cost for hazardous waste that may have economic value.

(5) The owner or operator shall adjust the cost estimate for inflation within the 60-day period before the anniversary date of the establishment of the financial mechanisms used to comply with the provisions of R 299.9713. For owners and operators who use the financial test or corporate guarantee, the cost estimate for corrective action shall be updated within 30 days after the close of the firm's fiscal year and before the submission of updated information to the director. The adjustment for inflation may be made by recalculating the costs in current dollars or by using an inflation factor that is derived from the most recent annual implicit price deflator for gross national product published by the United States department of commerce in its survey of current business.

(6) The owner or operator shall adjust the cost estimate for corrective action not later than 30 days after the director has approved a modification to the corrective action program if the modification increases the cost of corrective action.

R 299.9713 Financial assurance for corrective action.

Rule 713. (1) The owner or operator shall establish financial assurance for the cost of performing corrective action at the facility in accordance with the provisions of R 299.9629.

(2) The owner or operator shall maintain the financial assurance for corrective action until the corrective action is completed and the owner or operator is released from this requirement by the director.

(3) During the period in which the corrective action program is implemented, the director may approve a reduction in the amount of financial assurance that is required for corrective action if the owner or operator demonstrates, to the director's satisfaction, that the amount of the financial assurance exceeds the remaining cost of corrective action.

(4) If the director issues a notice of violation or other order to the owner or operator alleging a violation of the corrective action program, the director may, after providing the owner or operator 7 days' notice and an opportunity for a hearing, access funds to correct violations, complete corrective action, and maintain the facility in accordance with the corrective action program.

(5) Within 60 days after receiving certification from the owner or operator and an independent registered professional engineer that corrective action has been completed in accordance with the corrective action program, the director shall notify the owner or operator, in writing, that the owner or operator is no longer required by this rule to maintain financial assurance for corrective action at a particular facility, unless the director has reason to believe that any aspect of corrective action has not been completed in accordance with the corrective action program. The director shall provide the owner or operator with a detailed written statement of any reason to believe that corrective action has not been completed in accordance with the corrective action program.

(6) An owner or operator shall notify the director, by certified mail, of the commencement of a voluntary or involuntary proceeding under the bankruptcy provisions of public law 95-598, 11 U.S.C. §§1 to 151302, naming the owner or operator as debtor, within 10 days after commencement of the proceeding.

(7) An owner or operator who fulfills the requirements of this rule by obtaining a trust fund, surety bond, letter of credit, or insurance policy shall be deemed to be without the required financial assurance in the event of bankruptcy of the trustee or issuing institution, a suspension or revocation of the authority of the trustee institution to act as a trustee, or a suspension or revocation of the authority

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 within 60 days after any event specified in this subrule.

PART 8. MANAGEMENT OF SPECIFIC HAZARDOUS WASTES, SPECIFIC TYPES OF HAZARDOUS WASTE MANAGEMENT FACILITIES, AND USED OIL

R 299.9801 Recyclable materials used in manner constituting disposal.

Rule 801. (1) The requirements of this rule apply to recyclable materials that are applied to or placed on the land in either of the following ways:

(a) Without mixing with any other substance.

(b) After mixing or combining with any other substance or substances.

(2) The materials specified in subrule (1) of this rule are referred to in this rule as materials "used in a manner that constitutes disposal."

(3) 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 under these rules if the recyclable materials have undergone a chemical reaction in the course of producing the product so as to become inseparable by physical means and if the products are in compliance with the applicable treatment standards specified in R 299.9313, R 299.9413, and R 299.9627, or if no treatment standards have been established, the applicable prohibition levels specified in 40 CFR 268.32 or section 3004(d) of RCRA, 42 USC 6924(d), for each recyclable material that the products contain, and the recycler complies with 40 CFR 268.7(b)(6).

(4) An anti-skid/deicing use of slags that are generated from the high temperature metals recovery (HTMR) processing of K061, K062, and F006 in a manner that constitutes disposal is not covered by the exemption in subrule (3) of this rule and the use remains subject to regulation under part 111 of the act, MCL 324.11101 to 324.11153, and these rules.

(5) Fertilizers that contain recyclable materials are not subject to regulation provided that they meet both of the following conditions:

(a) They are zinc fertilizers excluded from the definition of waste according to R 299.9204(1)(x).

(b) They meet the applicable treatment standards in 40 CFR part 268, subpart D for each hazardous waste they contain.

(6) Generators and transporters of materials that are used in a manner that constitutes disposal are subject to the applicable requirements of parts 3 and 4 of these rules.

(7) 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 pursuant to all of the applicable provisions of parts 5, 6, and 7 of these rules.

(8) Owners or operators of facilities that use recyclable materials in a manner that constitutes disposal are regulated pursuant to all of the applicable provisions of parts 5, 6, and 7 of these rules, except that these requirements do not apply to products that contain these recyclable materials pursuant to subrule (3) of this rule.

(9) Waste, used oil, or other material that is contaminated with a hazardous waste must not be used for dust suppression or road treatment.

R 299.9802 Rescinded.

R 299.9803 Recyclable materials utilized for precious metals recovery.

Rule 803. (1) The requirements of this rule apply to recyclable materials that are reclaimed to recover economically significant amounts of any of the following elements:

(a) Gold.

(b) Silver.

(c) Platinum.

(d) Palladium.
(e) Iridium.
(f) Osmium.
(g) Rhodium.
(h) Ruthenium.
(i) Any combination of the elements listed in subdivisions (a) to (h) of this subrule.
(2) Persons who generate, transport, or store recyclable materials that are regulated under this rule are subject to the following requirements:
(a) For generators, the identification number requirements of R 299.9308 and manifest requirements of R 299.9309.
(b) For transporters, the requirements of part 4 of these rules.
(c) For persons who store, the manifest requirements of R 299.9608.
(d) For persons who export precious metals to, or import precious metals from, designated Organization for Economic Cooperation and Development member countries for the purpose of recovery, the requirements of R 299.9314 and 40 CFR 265.12(a)(2).
(e) For persons who export precious metals to, or import precious metals from, non-Organization for Economic Cooperation and Development member countries for the purpose of recovery, the requirements of R 299.9314.
(3) Persons who store recyclable materials that are regulated under this rule shall keep all of the following records to document that the storage does not constitute speculative accumulation:
(a) Records showing the volume of these materials stored at the beginning of the calendar year.
(b) The amount of these materials generated or received during the calendar year.
(c) The amount of these materials remaining at the end of the calendar year.
(4) Recyclable materials that are regulated under this rule and that are accumulated speculatively are subject to all applicable provisions of these rules.
(5) The director may decide, on a case-by-case basis, that persons accumulating or storing recyclable materials from which precious metals are reclaimed shall be regulated under R 299.9206(1). 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 all of the following factors:
(a) The types of materials accumulated or stored and the amounts accumulated or stored.
(b) The methods of accumulation or storage.
(c) The length of time the materials have been accumulated or stored before being reclaimed.
(d) Whether any contaminants are being released into the environment or are likely to be so released.
(e) Any other relevant factors.
(6) The director shall use the following procedures when determining whether to regulate hazardous waste recycling activities involving recyclable materials from which precious metals are reclaimed under R 299.9206(1) rather than under subrules (1) to (4) of this rule:
(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 part 3 of these rules. The notice becomes final after 30 days, unless the person served contests the decision under act 306. As part of the appeal procedure under act 306, the director shall hold a public hearing, provide notice of the public hearing, and allow public participation at the hearing. After the appeal procedures of act 306 are completed, the director shall issue a final order stating if compliance with part 3 of these rules is required. The order becomes effective 30 days after service of the decision, unless the director

specifies a later date or unless review by the director is requested. The order may be appealed to the director by any person who participated in the public hearing. The director may choose to grant or to deny the appeal. Final action occurs when a final order is issued and appeal procedures under act 306 are exhausted.

(b) If the person accumulating the recyclable material is a storage facility, then the notice must state that the person shall obtain an operating license in accordance with all applicable provisions of part 5 of these rules. The owner or operator shall apply for an operating license within not less than 60 days and not more than 6 months of notice, as specified in the notice. If the owner or operator wishes to contest the director's decision under act 306, then he or she may do so in his or her license application, in a public hearing held on the draft license, or in comments filed on the draft license or in the notice of intent to deny the license. The fact sheet accompanying the license must specify the reasons for the director's determination. The question of whether the director's decision was proper remains open for consideration during all public comment periods and hearings.

R 299.9804 Spent lead acid batteries being reclaimed.

Rule 804. (1) The requirements of this rule apply to persons who generate, collect, transport, store, or regenerate spent lead acid batteries for reclamation purposes.

(2) Persons who manage spent lead acid batteries that will be reclaimed through regeneration are not subject to parts 3 to 7 of these rules except for the requirements of R 299.9302 and R 299.9311(1). These persons shall also comply with the requirements of part 2 of these rules.

(3) Persons who generate, collect, or transport spent lead acid batteries which will be reclaimed by a means other than regeneration are not subject to parts 3 to 7 of these rules except for the requirements of R 299.9302 and R 299.9311(1). These persons shall also comply with the requirements of part 2 of these rules and 40 CFR part 268.

(4) Persons who store spent lead acid batteries that will be reclaimed by a means other than regeneration but do not reclaim the batteries themselves are not subject to parts 3 to 7 of these rules except for the requirements of R 299.9302 and R 299.9311(1). These persons shall also comply with the requirements of part 2 of these rules and 40 CFR part 268.

(5) Persons who store spent lead acid batteries that will be reclaimed by a means other than regeneration and store these batteries before reclaiming the batteries themselves are subject to all applicable requirements of R 299.9302, R 299.9311(1), and parts 2, 5, 6, and 7 of these rules, except for the manifest requirements of R 299.9608.

(6) Persons who manage spent lead acid batteries that will be reclaimed by a means other than regeneration and do not store these batteries before reclaiming the batteries themselves are not subject to parts 3 to 7 of these rules except for the requirements of R 299.9302 and R 299.9311(1). These persons shall also comply with the requirements of part 2 of these rules and 40 CFR part 268.

(7) Persons who export spent lead acid batteries for reclamation through regeneration or any other means in a foreign country are not subject to parts 3 to 7 of these rules except for the requirements of R 299.9302, R 299.9311(1), and R 299.9314. These persons shall also comply with the requirements of part 2 of these rules.

(8) Persons who transport spent lead acid batteries in U.S. that are to be exported for reclamation through regeneration or any other means in a foreign country are not subject to parts 4 to 7 of these rules. These persons shall comply with the requirements of R 299.9314.

(9) Persons who store spent lead acid batteries imported from a foreign country that will be reclaimed by a means other than regeneration but do not reclaim the batteries themselves are not subject to parts 3 to 7 of these rules except for the requirements of R 299.9302, R 299.9311(1), R 299.9314, and 40 CFR part 268. These persons shall also comply with the requirements of part 2 of these rules.

(10) Persons who store spent lead acid batteries imported from a foreign country that will be reclaimed by a means other than regeneration before reclaiming the batteries themselves are subject to all applicable requirements of R 299.9302, R 299.9311(1), R 299.9314, and parts 2, 5, 6, and 7 of these rules, except for the manifest requirements of R 299.9608.

(11) Persons who import spent lead acid batteries from a foreign country that will be reclaimed by a means other than regeneration and do not store the batteries before reclaiming the batteries themselves are not subject to parts 3 to 7 of these rules except for the requirements of R 299.9302, R 299.9311(1), R 299.9314, and 40 CFR part 268. These persons shall also comply with the requirements of part 2 of these rules.

(12) Instead of managing spent lead acid batteries in accordance with this rule, persons may manage spent lead acid batteries as universal wastes in accordance with the requirements of R 299.9228.

(13) 40 CFR part 268 is adopted by reference in R 299.11003. For the purposes of adoption, the term "R 299.9312(1)" replaces the term "§262.41," the term "R 299.9309" replaces the term "40 CFR 262, subpart B," the term "R 299.9804" replaces the term "40 CFR 266, subpart G," and the term "R 299.9228 and R 299.9229" replaces the term "40 CFR part 273."

R 299.9805 Rescinded.

R 299.9806 Rescinded.

R 299.9807 Rescinded.

R 299.9808 Management of hazardous waste burned in boilers and industrial furnaces.

Rule 808. (1) The requirements of this rule apply to hazardous waste that is burned or processed in a boiler or industrial furnace irrespective of the purpose of the burning or processing, except as noted in subrules (2) to (4) of this rule. For the purposes of this rule, the term "burn" means burning hazardous waste for energy recovery or destruction or processing hazardous waste for materials recovery or as an ingredient.

(2) The following hazardous wastes and facilities are not subject to this rule:

(a) Used oil burned for energy recovery that is also a hazardous waste solely because it exhibits a characteristic of hazardous waste identified in R 299.9212. The used oil is subject to regulation under R 299.9809 to R 299.9816.

(b) Gas recovered from hazardous waste or solid waste landfills when the gas is burned for energy recovery.

(c) Hazardous wastes that are exempt from regulation under R 299.9204 and R 299.9206(3)(c) to (f), and hazardous wastes that are subject to the special requirements for very small quantity generators pursuant to R 299.9304.

(d) Coke ovens, if the only hazardous waste burned in an oven is K087.

(3) The following owners or operators are not subject to regulation under this rule, except as noted:

(a) An owner or operator of a smelting, melting, and refining furnace, including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces, that processes hazardous waste solely for metal recovery is exempt from regulation under this rule, except for the requirements of subrules (6) and (8) of this rule, if the owner or operator is in compliance with the requirements of 40 CFR 266.100(d)(1) to (3). The exemption does not apply to cement kilns, aggregate kilns, or halogen acid furnaces that process hazardous waste solely for metals recovery.

(b) An owner or operator of a smelting, melting, and refining furnace, including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces, that processes 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 the metals, is exempt from regulation under this rule, except for the requirements of subrule (8) of this rule, if the owner or operator is in compliance with the requirements of 40 CFR 266.100(g)(1) to (3).

(c) An owner or operator of a facility that burns, in an on-site boiler or industrial furnace that is exempt from regulation under the small quantity provisions of 40 CFR 266.108, hazardous waste that the facility has generated is exempt from regulation under parts 5 to 7 of these rules for 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. The storage of hazardous waste before mixing it with the primary fuel is subject to subrule (6) of this rule.

(d) An owner or operator of a facility that burns hazardous waste in an on-site boiler or industrial furnace, if all of the small quantity exemption criteria outlined in 40 CFR 266.108 are met.

(4) Except as noted in this subrule, part 8 of these rules does not apply to owners and operators of a new cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace that becomes subject to the license requirements of these rules after October 12, 2005, or to owners or operators of an existing cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace if the owner or operator demonstrates compliance with the air emission standards and limitations in 40 CFR part 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 documents compliance with the requirements of 40 CFR part 63, subpart EEE. Nevertheless, after this compliance demonstration is made, the operating license conditions that are based on the standards of part 8 of these rules shall continue to be in effect until they are removed from the operating license or the operating license is terminated or revoked, unless the operating license expressly provides otherwise. The director may apply this subrule and subrule (5) of this rule, on a case-by-case basis, for collecting information pursuant to R 299.9504(18) and (20) and R 299.9521(3)(b) and (c).

(5) The maximum achievable control technology standards of 40 CFR part 63, subpart EEE, do not supersede any of the following requirements:

(a) R 299.9601, R 299.9605 to R 299.9610, R 299.9612, R 299.9613, R 299.9630, R 299.9631, R 299.9808(8) and part 7 of these rules and 40 CFR part 265, subparts A to D, F, G, BB, and CC, and 266.102(e)(11), 266.103(l), 266.111, 266.112, except 266.112(a) and (c), as applicable.

(b) The particulate matter standard of 40 CFR 266.105 if the owner or operator elects to comply with the alternative to the particulate matter standard under 40 CFR 63.1216(e) and 63.1217(e).

(c) The following requirements remain in effect for startup, shutdown, and malfunction events even if a person elects to comply with 40 CFR 270.235(a)(1)(i) to minimize emissions of toxic compounds from these events, or for source areas if a person elects to comply with 40 CFR 266.105 to 266.107 and the associated requirements for particulate matter, hydrogen chloride and chlorine gas, and non-mercury metals:

(i) The requirements of 40 CFR 266.102(e)(1) which require that a boiler or industrial furnace operate pursuant to the operating requirements specified in the operating license at all times that hazardous waste is in the unit.

(ii) The requirements of 40 CFR 266.102(e)(2)(iii) which require 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.

(d) The following requirements remain in effect for owners or operators of a boiler or hydrochloric acid production furnace that is an area source under 40 CFR 63.2 if the owner or operator does not elect 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:

(i) The requirements of 40 CFR 266.105.

(ii) The requirements of 40 CFR 266.106.
(iii) The requirements of 40 CFR 266.107.
(6) A generator and a transporter of hazardous waste that is burned in a boiler or industrial furnace shall comply with parts 3 and 4 of these rules, respectively.
(7) An owner or operator of a facility that stores hazardous waste that is burned in a boiler or industrial furnace shall comply with the applicable requirements of parts 5 to 7 of these rules. The requirements of parts 5 to 7 of these rules apply to the storage by the burner and to storage facilities operated by intermediaries, including processors, blenders, distributors, between the generator and the burner.
(8) An owner or operator of a boiler or an industrial furnace that burns hazardous waste shall comply with the applicable requirements of parts 5 to 7 of these rules and 40 CFR part 266, subpart H and appendices I to XIII; except 266.100(a) and (b), 266.101, 266.102(a), and 266.112(a) and (c); and 270.66.
(9) A residue derived from the burning or processing of hazardous waste in a boiler or industrial furnace is not excluded from the definition of hazardous waste under R 299.9204(2)(d), (i), and (k), unless the device and the owner or operator are in compliance with all of the following requirements:
(a) The device meets the following criteria:
(i) If the device is a boiler, it must burn not less than 50% coal on a total heat input or mass input basis, whichever results in the greater mass feed rate of coal.
(ii) If the device is an industrial furnace subject to R 299.9204(2)(i), it must process not less than 50%, by weight, normal, nonhazardous raw materials.
(iii) If the device is a cement kiln, it must process not less than 50%, by weight, normal cement production raw materials.
(b) The owner or operator demonstrates, in writing, to the director's satisfaction, that the hazardous waste does not significantly affect the residue by demonstrating conformance with the criteria outlined in 40 CFR 266.112(b)(1) and (2).
(c) Records sufficient to document compliance with this subrule must be retained until closure of the boiler or industrial furnace unit. At a minimum, the following information must be included in the records, as applicable:
(i) The levels of constituents in 40 CFR part 261, appendix VIII, that are present in waste-derived residues.
(ii) If the waste-derived residue is compared with normal residue under this subrule, then all of the following information must be documented in the records:
(A) The levels of constituents in 40 CFR part 261, appendix VIII, that are present in normal residues.
(B) Data and information, including analyses of samples as necessary, that were obtained to determine if changes in raw materials or fuels would reduce the concentration of toxic constituents of concern in the normal residue.
(10) 40 CFR parts 265, subparts A to D, F, G, BB, and CC, and 266, subpart H and appendices I to XIII, except 40 CFR 266.100(a) and (b), 266.101, 266.102(a), and 266.112(a) and (c), 40 CFR 270.66, and 270.235(a)(1)(i) are adopted by reference in R 299.11003. For the purposes of 40 CFR part 266, subpart H and 270.66, the term "director" replaces the term "regional administrator."

R 299.9809 Used oil regulation; applicability.
Rule 809. (1) Used oil and the following materials are subject to regulation as used oil under R 299.9810 to R 299.9816, unless otherwise specified in subrule (2) of this rule:
(a) A mixture of used oil and hazardous waste, except a mixture of used oil and halogenated

hazardous waste listed under R 299.9213 or R 299.9214, generated by a very small quantity generator who is regulated under R 299.9304.

(b) A material that contains, or is otherwise contaminated with, used oil and is burned for energy recovery.

(c) Used oil that is drained or removed from materials that contain, or are otherwise contaminated with, used oil.

(d) A mixture of used oil and fuel.

(e) A material that is produced from used oil and that is burned for energy recovery.

(f) Used oil that is burned for energy recovery and any fuel produced from used oil by processing, blending, or other treatment if it exceeds any of the used oil specifications. Specification used oil is used oil that does not exceed any of the used oil specifications. Off-specification used oil is used oil that exceeds any of the specifications specified in this subdivision. The used oil specifications are as follows:

(i) A maximum arsenic concentration of 5 parts per million.

(ii) A maximum cadmium concentration of 2 parts per million.

(iii) A maximum chromium concentration of 10 parts per million.

(iv) A maximum lead concentration of 100 parts per million.

(v) A minimum flash point of 100 degrees Fahrenheit.

(vi) A maximum total halogen concentration of 4,000 parts per million.

(g) Used oil that is recycled and is also a hazardous waste solely because it exhibits a hazardous characteristic.

(h) Used oil that contains polychlorinated biphenyls at any concentration less than 50 parts per million unless, because of dilution, it is regulated under 40 CFR part 761 as a used oil that contains polychlorinated biphenyls at concentrations of 50 parts per million or greater. Such used oil may also be subject to 40 CFR part 761, including 40 CFR 761.20(d) and (e). Marketers and burners of used oil who market used oil that contains any quantifiable level, 2 parts per million or greater, of polychlorinated biphehyls are also subject to the requirements of 40 CFR 761.20(e).

(2) The following materials are not subject to regulation as used oil under R 299.9810 to R 299.9816, but may be subject to regulation as a hazardous waste under part 111 of the act, MCL 324.11101 to 324.11153, and these rules:

(a) A mixture of used oil and hazardous waste, except as specified in subrule (1)(a) of this rule.

(b) Used oil that contains more than 1,000 parts per million total halogens is presumed to be a hazardous waste and is regulated under part 111 of the act, MCL 324.11101 to 324.11153, and these rules. A person may rebut the presumption by demonstrating that the used oil does not contain hazardous waste. The demonstration may be made by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents that are listed in 40 CFR part 261, appendix VIII. The rebuttable presumption rule does not apply to the following materials:

(i) Metalworking oils or fluids that contain chlorinated paraffins if the oils or fluids are processed through a tolling arrangement as specified in 40 CFR 279.24(c) to reclaim the oils or fluids. The rebuttable presumption does apply, however, if the oils or fluids are recycled in any other manner or disposed of.

(ii) Used oil that is contaminated with chlorofluorocarbons that have been removed from refrigeration units if the chlorofluorocarbons are destined for reclamation. The rebuttable presumption does apply, however, if the used oil is contaminated with chlorofluorocarbons that have been mixed with used oil from sources other than refrigeration units.

(c) A material that contains, or is otherwise contaminated with, used oil if the used oil has been properly drained or removed to the extent possible so that visible signs of free-flowing oil do not remain in or on the material and the material is not burned for energy recovery.

(d) A mixture of used oil and diesel fuel that is mixed on-site by the generator of the used oil for use in the generator's own vehicles. Before mixing, the used oil is regulated under subrule (1) of this rule.

(e) Used oil and materials that are derived from used oil and that are disposed of or used in a manner constituting disposal.

(f) Used oil rerefining distillation bottoms that are used as a feedstock to manufacture asphalt products.

(g) Wastewater, the discharge of which is subject to regulation pursuant to either section 402 or section 307(b) of the federal clean water act, 33 USC 1342 or 1317(b), including wastewater at facilities that have eliminated the discharge of wastewater, that is contaminated with de minimis quantities of used oil. As used in this subdivision, "de minimis quantities of used oil" means small spills, leaks, or other drippings from pumps, machinery, pipes, and other similar equipment during normal operations or small amounts of oil lost to the wastewater treatment system during washing or draining operations. De minimis quantities of used oil do not include used oil discarded as a result of abnormal manufacturing operations that result in substantial leaks, spills, or other releases or to used oil recovered from wastewaters.

(h) Used oil mixed with crude oil or natural gas liquids for insertion into a crude oil pipeline. Before mixing with crude oil or natural gas liquids, the used oil is regulated under subrule (1) of this rule.

(i) A mixture of used oil and crude oil or natural gas liquids that contains less than 1% used oil if the mixture is being stored, or transported to a crude oil pipeline or petroleum refining facility, for insertion into the refining process at a point before crude distillation or catalytic cracking.

(j) Used oil that is inserted into the petroleum refining facility process before crude distillation or catalytic cracking without prior mixing if the used oil constitutes less than 1% of the crude oil feed to any petroleum refining facility process unit at any given time. Before insertion into the petroleum refining facility, the used oil is regulated under subrule (1) of this rule.

(k) Used oil that is introduced into a petroleum refining facility process after crude distillation or catalytic cracking if the used oil meets the used oil specifications under subrule (1)(f) of this rule. Before insertion into the petroleum refining facility process, the used oil is regulated under subrule (1) of this rule.

(l) Used oil that is incidentally captured by a hydrocarbon recovery system or wastewater treatment system as part of routine process operations at a petroleum refining facility and inserted into the petroleum refining process. Used oil that is intentionally introduced into a hydrocarbon recovery system or wastewater treatment system is regulated as a used oil under subrule (1) of this rule.

(m) Tank bottoms from stock tanks that contain exempt mixtures of used oil and crude oil or natural gas liquids.

(n) Used oil that is produced on vessels from normal shipboard operations. Once the used oil is transported ashore, which is when the used oil is considered to be generated by the owner or operator of the vessel and the person removing or accepting the used oil from the vessel, then the used oil is regulated under subrule (1) of this rule.

(o) Specification used oil fuel when the person who determined that the used oil fuel is specification used oil fuel demonstrates compliance with the requirements of R 299.9815(3)(b), (c), and (f) and 40 CFR 279.73.

(p) Used oil that contains polychlorinated biphenyls at concentrations of 50 parts per million or greater. This used oil is subject to regulation under 40 CFR part 761. No person may avoid these provisions by diluting used oil that contains polychlorinated biphenyls, unless otherwise specifically provided for under part 8 of these rules or under 40 CFR part 761.

(3) 40 CFR part 761 is adopted by reference in R 299.11003.

R 299.9810 Used oil generators; requirements.

Rule 810. (1) The requirements of this rule apply to a used oil generator, unless otherwise specified in subrule (2).

(2) The requirements of this rule do not apply to the following:

(a) A household do-it-yourselfer used oil generator.

(b) A farmer who generates, in a calendar year, an average of 25 gallons per month or less of used oil from vehicles or machinery used on the farm.

(3) A used oil generator shall comply with the provisions of 40 C.F.R. §§279.22, 279.23, and 279.24, except §279.22(a).

(4) A used oil generator shall not store used oil in units other than containers or tanks.

(5) The provisions of 40 C.F.R. §§279.22, 279.23, and 279.24, except §279.22(a), are adopted by reference in R 299.11003. For the purposes of the adoption, the word "director" shall replace the words "regional administrator."

R 299.9811 Used oil collection centers and aggregation points; requirements.

Rule 811. (1) The requirements of this rule apply to an owner or operator of a used oil collection center or aggregation point.

(2) An owner or operator of a do-it-yourselfer used oil collection center, used oil collection center, or used oil aggregation point shall comply with both of the following requirements:

(a) The provisions of R 299.9810.

(b) Provide written notification of used oil management activities to the department.

R 299.9812 Used oil transporters and transfer facilities; requirements.

Rule 812. (1) The requirements of this rule apply to a used oil transporter unless otherwise specified in subrule (2) of this rule.

(2) The requirements of this rule do not apply to any of the following:

(a) The on-site transportation of used oil by the generator.

(b) A used oil generator who transports shipments of used oil that total 55 gallons or less from the generator to a used oil collection center as specified in the provisions of 40 C.F.R. §279.24(a).

(c) A used oil generator who transports shipments of used oil that total 55 gallons or less from the generator to a used oil aggregation point that is owned or operated by the same generator as specified in the provisions of 40 C.F.R. §279.24(b).

(d) The transportation of used oil from household do-it-yourselfers to a regulated used oil generator, used oil collection center, used oil aggregation point, processor or rerefiner, or a used oil burner. The exemption does not apply to the transportation of collected household do-it-yourselfer used oil from a used oil generator, used oil collection center, used oil aggregation point, or other facilities where household do-it-yourselfer used oil is collected.

(3) A used oil transporter and an owner or operator of a used oil transfer facility shall comply with the provisions of 40 C.F.R. §§279.41, 279.42, 279.43, 279.45, and 279.46, except §279.45(b).

(4) A used oil transporter shall ensure that the used oil being transported or stored at a transfer facility is not a hazardous waste pursuant to the provisions of R 299.9809(2)(b). The determination shall be made by testing the used oil, applying knowledge of the halogen content of the used oil in light of the materials or processes used, or by obtaining copies of analyses or other information from the generator. Records of the analyses conducted or information used to comply with this subrule shall be maintained by the transporter for a period of not less than 3 years.

(5) An owners or operator of a used oil transfer facility shall not store used oil in units other than containers or tanks.

(6) A used oil transporter who generates residues from the storage or transport of used oil shall manage the residues in accordance with part 111 of the act and these rules.

(7) The provisions of 40 C.F.R. §§279.24, 279.41, 279.42, 279.43, 279.45, and 279.46, except §279.45(b), are adopted by reference in R 299.11003. For the purposes of the adoption, the word "director" shall replace the words "regional administrator," and the term "R 299.9813" shall replace the words "subpart F of this chapter."

R 299.9813 Used oil processors and rerefiners; requirements.

Rule 813. (1) The requirements of this rule apply to an owner or operator of a facility that processes used oil, unless otherwise specified in subrule (2) of this rule.

(2) The requirements of this rule do not apply to any of the following:

(a) Incidental processing that occurs during the normal course of transportation as provided in 40 C.F.R. §279.41.

(b) Incidental processing that occurs during the normal course of used oil management before burning as provided in 40 C.F.R. §279.61(b).

(c) A used oil generator who performs any of the following activities is not a processor if the used oil is generated on-site and is not being sent off-site to a burner of specification or off-specification used oil fuel:

(i) Filtering, cleaning, or otherwise reconditioning used oil before returning it for reuse by the generator.

(ii) Separating used oil from wastewater generated on-site to make the wastewater acceptable for discharge or reuse pursuant to section 402 or section 307(b) of the federal clean water act or other applicable federal or state requirements governing the management or discharge of wastewaters.

(iii) Using oil mist collectors to remove small droplets of used oil from in-plant air to make plant air suitable for continued recirculation.

(iv) Draining or otherwise removing used oil from materials that contain, or are otherwise contaminated with, used oil to remove excessive oil to the extent possible pursuant to the provisions of R 299.9809(2)(c).

(v) Filtering, separating, or otherwise reconditioning used oil before burning it in a space heater pursuant to the provisions of 40 C.F.R. §279.23.

(3) An owner or operator of a facility that processes used oil shall comply with the provisions of 40 C.F.R. §§279.51, 279.52, 279.54, 279.55, 279.56, 279.57, and 279.58, except §279.54(a).

(4) An owners or operator of a facility that processes used oil shall ensure that the used oil is not a hazardous waste pursuant to the provisions of R 299.9809(2)(b). The determination shall be made by testing the used oil or applying knowledge of the halogen content of the used oil in light of the materials or processes used. Records of the analyses conducted or information used to comply with this subrule shall be maintained by the owner or operator for a period of not less than 3 years.

(5) An owner or operator of a facility that processes used oil shall not store used oil in units other than containers or tanks.

(6) An owners or operator of a facility who generates residues from the storage, processing, or rerefining of used oil shall manage the residues in accordance with part 111 of the act and these rules.

(7) The provisions of 40 C.F.R. §§279.41, 279.51, 279.52, 279.54, 279.55, 279.56, 279.57, 279.58, and 279.61, except §279.54(a), are adopted by reference in R 299.11003. For the purposes of the adoption, the word "director" shall replace the words "regional administrator" and the term "R 299.9813" shall replace the words "subpart F of this chapter."

R 299.9814 Used oil burners who burn off-specification used oil for energy recovery; requirements.

Rule 814. (1) The requirements of this rule apply to a owner or operator of a facility that burns used oil for energy recovery, unless otherwise specified in subrule (2) of this rule.

(2) The requirements of this rule do not apply to any of the following:

(a) A facility that burns used oil for energy recovery under either of the following conditions:

(i) The used oil is burned by a used oil generator in an on-site space heater pursuant to the provisions of 40 C.F.R. §279.23.

(ii) The used oil is burned by a used oil processor or rerefiner for the purposes of processing used oil, which is considered burning incidentally to used oil processing.

(b) A person who burns specification used oil if the burner is in compliance with the requirements of R 299.9815.

(3) A used oil burner shall comply with both of the following restrictions on burning:

(a) Off-specification used oil fuel shall be burned for energy recovery in only the following types of devices:

(i) An industrial furnace.

(ii) A boiler that meets 1 of the following criteria:

(A) It is an industrial boiler that is located on the site of a facility which is engaged in a manufacturing process where substances are transformed into new products, including component parts of products, by mechanical or chemical processes.

(B) It is a utility boiler that is used to produce electric power, steam, heated or cooled air, or other gases or fluids for sale.

(C) It is a used oil-fired space heater if the burner is in compliance with the provisions of 40 C.F.R. §279.23.

(iii) A hazardous waste incinerator subject to regulation under part 6 of these rules.

(b) A used oil burner may aggregate off-specification used oil with virgin oil or specification used oil for the purposes of burning, but shall not conduct such aggregation for the purposes of producing specification used oil fuel.

(4) A used oil burner shall comply with the provisions of 40 C.F.R. §§279.62, 279.64, 279.65, and 279.66, except §279.64(a).

(5) A used oil burner shall ensure that the used oil managed at the used oil burner facility is not a hazardous waste pursuant to the provisions of R 299.9809(2)(b). The determination shall be made by testing the used oil, applying knowledge of the halogen content of the used oil in light of the materials or processes used, by obtaining copies of analyses or other information from the generator, or, if the used oil has been received from a processor or rerefiner regulated under the provisions of R 299.9813, using the information provided by the processor or rerefiner. Records of the analyses conducted or information used to comply with this subrule shall be maintained by the burner for a period of not less than 3 years.

(6) A used oil burner shall not store used oil in units other than containers or tanks.

(7) A used oil burner who generates residues from the storage or burning of used oil shall manage the residues in accordance with part 111 of the act and these rules.

(8) The provisions of 40 C.F.R. §§279.23, 279.62, 279.64, 279.65, and 279.66, except §279.64(a), are adopted by reference in R 299.11003. For the purposes of the adoption, the word "director" shall replace the words "regional administrator."

R 299.9815 Used oil fuel marketers; requirements.

Rule 815. (1) The requirements of this rule apply to a person who conducts either of the following activities:

(a) Directs a shipment of off-specification used oil from his or her facility to a used oil burner.

(b) First claims that the used oil which is to be burned for energy recovery meets the used oil specifications of R 299.9809(1)(f).

(2) The requirements of this rule do not apply to the following:

(a) A used oil generator, and a transporter who transports used oil that is received only from generators, unless the generator or transporter directs a shipment of off-specification used oil from his or her facility to a used oil burner. Used oil processors or rerefiners who burn some used oil fuel for the purposes of processing are considered to be burning incidentally to processing. A used oil generator or transporter who directs shipments of off-specification used oil to used oil processors or rerefiners who incidently burn used oil is not a used oil fuel marketer subject the requirements of this rule.

(b) A person who directs shipments of specification used oil fuel and who is not the first person to claim that the used oil meets the used oil specification of R 299.9809(1)(f).

(3) A used oil fuel marketer shall comply with all of the following requirements:

(a) Initiate shipments of off-specification used oil only to a used oil burner who is in compliance with both of the following requirements:

(i) Has a site identification number.

(ii) Burns the used oil in an industrial furnace or boiler as identified in R 299.9814(3)(a).

(b) Determine that the used oil which is to be burned for energy recovery meets the used oil specifications of R 299.9809(1)(f) by performing analyses of the used oil or by obtaining copies of analyses or other information documenting that the used oil meets the specifications.

(c) Maintain copies of the analyses of the used oil or other information used to make the determination that the used oil meets the used oil specifications of R 299.9809(1)(f) for a period of 3 years after the determination is made.

(d) The provisions of 40 C.F.R. §§279.73 and 279.75.

(e) Maintain a record of each shipment of off-specification used oil to a used oil burner for a period of not less than 3 years from the date of shipment. The records shall take the form of a log, invoice, manifest, bill of lading, or other shipping documents. The records for each shipment shall include all of the following information:

(i) The name, address, and site identification number of the transporter who delivers the used oil to the burner.

(ii) The name, address, and site identification number of the burner who will receive the used oil.

(iii) The quantity of used oil shipped.

(iv) The date of the used oil shipment.

(f) Maintain a record of each shipment of specification used oil to the facilities to which the marketer delivers the used oil for a period of not less than 3 years from the date of shipment. The records shall take the form of log, invoice, manifest, bill of lading, or other shipping documents. The records for each shipment shall include all of the following information:

(i) The name and address of the facility that receives the shipment.

(ii) The quantity of used oil fuel delivered.

(iii) The date of the shipment or delivery.

(iv) A cross-reference to the record of used oil analysis or other information used to make the determination that the used oil meets the used oil specifications of R 299.9809(1)(f).

(4) The provisions of 40 C.F.R. §§279.73 and 279.75 are adopted by reference in R 299.11003. For the purposes of the adoption, the word "director" shall replace the words "regional administrator."

R 299.9816 Used oil disposal; requirements.

Rule 816. (1) The requirements of this rule apply to all used oil that cannot be recycled and is

therefore being disposed of. Used oil is assumed to be recycled unless the used oil handler disposes of the used oil or sends it for disposal.

(2) Used oil that is not hazardous waste and cannot be recycled in accordance with the provisions of R 299.9810 to R 299.9815 shall be managed in accordance with the applicable federal and state regulations.

(3) The use of used oil as a dust suppressant is prohibited.

R 299.9817 Military munitions; applicability.

Rule 817. (1) Persons handling waste military munitions shall comply with the requirements of this rule and R 299.9818 to R 299.9821.

(2) Unless otherwise specified in this rule or R 299.9818 to R 299.9821, all applicable requirements of these rules apply to waste military munitions.

(3) A military munition is not a waste if it meets one of the following criteria:

(a) It is used for its intended purpose, including any of the following:

(i) Use in training military personnel or explosives and munitions emergency response specialists which may include the destruction of unused propellant or other munitions.

(ii) Use in research, development, testing, and evaluation of military munitions, weapons, or weapons systems.

(iii) Recovery, collection, and on-range destruction of unexploded ordnance and munitions fragments during range clearance activities at active or inactive ranges. However, in this case, "use for intended purpose" does not include the on-range disposal or burial of unexploded ordnance and contaminants if the burial is not a result of product use.

(b) It is an unused munition, or component thereof, which is being repaired, reused, recycled, reclaimed, disassembled, reconfigured, or otherwise subjected to materials recovery activities, unless such activities involve use constituting disposal or burning for energy recovery under R 299.9202.

(4) An unused military munition is a waste if any of the following occurs:

(a) The munition is abandoned by being disposed of, burned, detonated, incinerated, or treated before to disposal, except as provided in subrule (3) of this rule.

(b) The munition is being removed from storage in a military magazine or other storage area for the purpose of being disposed of, burned, or incinerated, or treated before disposal.

(c) The munition is deteriorated or damaged to the point that it cannot be put into serviceable condition, and cannot reasonably be recycled or used for other purposes. For the purposes of this provision, the term “damaged” shall mean cracked, leaking, or other impairment that compromises the integrity of the munition.

(d) The munition has been declared a waste by an authorized military official.

(5) A used or fired military munition is a waste if either of the following occurs:

(a) The munition is transported off range or from the site of use, where the site of use is not a range, for the purposes of storage, reclamation, treatment, disposal, or treatment before disposal.

(b) If the munition is recovered, collected, and disposed of by burial, or landfilling either on or off range.

(6) For the purposes of part 111 of the act, a used or fired military munition is a waste and therefore, is potentially subject to corrective action and imminent and substantial endangerment authorities under part 111 of the act, if the munition lands off-range and is not promptly rendered safe 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.

R 299.9818 Military munitions; waste munitions transportation standards.

Rule 818. (1) A person transporting waste military munitions shall comply with the requirements of 40 C.F.R. §266.203.

(2) The provisions of 40 C.F.R. §266.203 are adopted by reference in R 299.11003. For the purposes of the adoption, the words "40 CFR part 261" shall be replaced by the words "part 2 of these rules" and the words "40 CFR parts 260 through 270" shall be replaced by the words "these rules."

R 299.9819 Military munitions; emergency response standards.

Rule 819. Explosives and munitions emergencies involving military munitions or explosives shall comply with R 299.9301(8), R 299.9401(6), R 299.9501(3), and R 299.9503(2).

R 299.9820 Military munitions; waste munitions storage standards.

Rule 820. (1) Any person storing waste military munitions shall comply with the requirements of 40 C.F.R. §266.205(a), (b), (d), and (e)

(2) Any person not complying with the criteria outlined in 40 C.F.R. §266.205(a) is subject to the requirements of parts 5 and 6 of these rules.

(3) The provisions of 40 C.F.R. §266.205(a), (b), (d), and (e) are adopted by reference in R 299.11003. For the purposes of this adoption, the words "part 2 of these rules" shall replace the words "40 CFR part 261," the words "the act and these rules" shall replace the words "RCRA subtitle C," and the words "these rules" shall replace the words "40 CFR parts 260 through 279."

R 299.9821 Military munitions; waste munitions standards.

Rule 821. The treatment and disposal of military munitions which are considered a hazardous waste under these rules are subject to all of the applicable licensing, procedural, and technical requirements of these rules.

R 299.9822 Low-level mixed waste storage and treatment; conditional exemption, eligibility, and standards.

Rule 822. (1) Persons storing and treating LLMW shall comply with these rules unless otherwise specified in this rule.

(2) LLMW is exempt from the definition of hazardous waste under the storage and treatment conditional exemption if both of the following requirements are met:

(a) The LLMW meets the eligibility requirements of subrule (3) of this rule.

(b) Persons storing and treating the LLMW comply with subrule (4) of this rule.

(3) LLMW is eligible for the LLMW storage and treatment conditional exemption if it is generated and managed under a single NRC or NRC agreement state license. A facility that receives LLMW generated at a facility with a different NRC or NRC agreement state license number is subject to the operating license requirements under parts 5 and 6 of these rules and is ineligible for the conditional exemption in subrule (2) of this rule. NARM waste is also ineligible for the conditional exemption in subrule (2) of this rule.

(4) In order to qualify for and maintain the LLMW storage and treatment conditional exemption, persons storing and treating LLMW shall comply with all of the following requirements:

(a) Provide to the department by certified delivery written notification that the conditional exemption is being claimed. The notification shall be provided to the department within 90 days of the effective date of this rule or within 90 days of when a storage or treatment unit is first used to store or treat conditionally exempt LLMW. The dated notification shall include all of the following information:

(i) The applicant's name.

(ii) The applicant's address.
(iii) The applicant's site identification number.
(iv) The applicant's NRC or NRC agreement state license number.
(v) The hazardous waste number(s) of the waste for which the exemption is being sought.
(vi) The storage unit(s) and treatment unit(s) for which the exemption is being sought.
(vii) A statement that the applicant meets the conditions of this rule.
(viii) The signature of an authorized representative certifying that the information in the notification is true, accurate, and complete.
(b) Store the LLMW in tanks or containers in compliance with the requirements of the NRC or NRC agreement state license that apply to the proper storage of LLRW, not including those requirements that relate solely to recordkeeping.
(c) Store the LLMW in tanks or containers in compliance with the chemical compatibility requirements for tanks or containers in part 6 of these rules.
(d) Certify that facility personnel who manage stored conditionally exempt LLMW are trained in a manner that ensures that the conditionally exempt waste is safely managed and includes training in chemical waste management and hazardous materials incidents response that meets the personnel training standards of 40 C.F.R. §265.16(a)(3).
(e) Conduct an inventory of the stored conditionally exempt LLMW at least annually and inspect the waste at least quarterly for compliance with this rule and R 299.9823, as applicable.
(f) Maintain an accurate emergency plan and provide the plan to all local authorities who may have to respond to a fire, explosion, or release of hazardous waste or hazardous constituents. The plan shall include all of the following information:
(i) A description of the emergency response arrangements with local authorities.
(ii) A description of the evacuation plans.
(iii) A list of the names, addresses, and telephone numbers of all facility personnel qualified to work with local authorities as emergency coordinators.
(iv) A list of the emergency equipment.
(g) Only treat the LLMW at the facility within a tank or container pursuant to the terms of the NRC or NRC agreement state license. Treatment that cannot be conducted in a tank or container without an operating license under these rules, such as incineration, is not allowed under the conditional exemption of subrule (2) of this rule.
(5) Failure to comply with the requirements of subrule (4) of this rule shall result in the automatic loss of the conditional exemption of subrule (2) of this rule. If the exemption is lost, the person handling the LLMW shall comply with all of the following requirements:
(a) Immediately manage the waste associated with the failure as a hazardous waste. The associated storage or treatment unit(s) shall become subject to the hazardous waste tank and container storage and treatment requirements of these rules, as applicable.
(b) Provide a written report by certified delivery to the department and the NRC, or the oversight agency in the NRC agreement state. The report shall be submitted within 30 days of learning of the failure to comply. The report shall be signed by an authorized representative certifying that the information provided in the report is true, accurate, and complete. The report shall include all of the following information:
(i) The specific conditions that were not met.
(ii) The waste name associated with the LLMW.
(iii) The hazardous waste number associated with the LLMW.
(iv) The quantity of LLMW involved.
(v) The storage or treatment location at the facility.
(vi) The date or dates upon which the failure to meet the conditions occurred.

(6) If the failure to meet any of the LLMW storage and treatment conditional exemption conditions may endanger human health or the environment, oral notification to the department shall be made within 24 hours and follow-up written notification shall be provided within 5 days. Failures that may endanger human health or the environment include, but are not limited to, the discharge of a cercla reportable quantity, leaking or exploding tanks or containers, detection of radionuclides above background, or detection of hazardous constituents in the leachate collection system of a storage area. Failures that may endanger human health or the environment require execution of emergency plans.

(7) The department may terminate a LLMW storage and treatment conditional exemption, or require additional conditions to claim an exemption, for serious or repeated noncompliance with any of the requirements of this rule and R 299.9823.

(8) Persons that have lost their LLMW storage and treatment conditional exemption may regain their exemption by complying with all of the following requirements:

(a) Complying with subrule (4) of this rule.

(b) Providing to the department by certified delivery written notification that the exemption is being reclaimed. The notification shall be signed by an authorized representative certifying that the information contained in the notice is true, accurate, and complete. The notification shall contain all of the following information:

(i) An explanation of the circumstances surrounding each failure to comply.

(ii) A certification that each failure has been corrected and that all of the conditions required for the exemption have been met as of the specified date.

(iii) A description of the plans that have been implemented, listing the specific steps taken to ensure that all of the conditions required for the exemption will be met in the future.

(iv) Any other information that should be considered by the department in reviewing the notice to reclaim the exemption.

(9) The department may terminate a reclaimed LLMW storage and treatment conditional exemption if the department finds that the claim is inappropriate based on factors including, but not limited to, any of the following:

(a) Not correcting the problem which resulted in loss of the exemption.

(b) Providing an unsatisfactory explanation of the circumstances surrounding the failure to comply with the requirements for the exemption.

(c) Not implementing a plan with steps to prevent another failure to comply with the requirements for the exemption.

(10) When reviewing a request to reclaim the LLMW storage and treatment conditional exemption under subrule (18) of this rule, the department may add additional conditions to the LLMW storage and treatment conditional exemption to ensure that the waste management during the storage and treatment of the waste will protect human health and the environment.

(11) In addition to the records required by a NRC or NRC agreement state license, all of the following records shall be kept:

(a) Initial notification records, return receipts, reports regarding failure to meet the exemption conditions, and all records supporting any reclamation of an exemption.

(b) Records of the LLMW annual inventories and quarterly inspections.

(c) Certification that facility personnel who manage stored or treated LLMW are trained in the safe management of the waste, including training in chemical waste management and hazardous materials incidents response.

(d) The emergency plan specified in subrule (4)(f) of this rule.

(12) Records concerning notifications, personnel training, and emergency plans shall be maintained at the facility for as long as the LLMW storage and treatment conditional exemption is claimed and for 3 years thereafter, or pursuant to NRC regulations under 10 C.F.R. part 20 or equivalent NRC

agreement state regulations, whichever is longer. Records concerning annual inventories and quarterly inspections shall be maintained at the facility for 3 years after the waste is sent for disposal, or pursuant to NRC regulations under 10 C.F.R. part 20 or equivalent NRC agreement state regulations, whichever is longer.

(13) The LLMW storage and treatment conditional exemption does not apply in the following situations:

(a) Once the LLMW has met the requirements of the NRC or NRC agreement state license for decay-in-storage and can be disposed of as nonradioactive waste. On that date, the waste is subject to regulation as a hazardous waste under these rules and the time period for accumulation of hazardous waste specified in part 3 of these rules begins.

(b) Once the LLMW, which has been generated and stored or treated under a single NRC or NRC agreement state license number, is removed from storage. However, the LLMW may qualify for the transportation and disposal conditional exemption in R 299.9823.

(14) Facilities that have been used to store only LLMW before the effective date of this rule, and after that date, store only LLMW which becomes exempt under this rule or R 299.9823, are not subject to the closure requirements of part 6 of these rules. Storage and treatment units, or portions thereof, that have been used to store both LLMW and non-mixed hazardous waste before the effective date of this rule, or are used to store both wastes after that date, remain subject to the closure requirements with respect to the non-mixed hazardous waste.

(15) The provisions of 10 C.F.R. part 20 and 40 C.F.R. §265.16(a)(3) are adopted by reference in R 299.11003.

R 299.9823 Low-level mixed waste and NARM waste transportation and disposal; conditional exemption, eligibility, and standards.

Rule 823. (1) Persons transporting and disposing of LLMW and NARM waste shall comply with the requirements of these rules unless otherwise specified in this rule.

(2) LLMW and NARM waste are exempt from the definition of hazardous waste under the transportation and disposal conditional exemption if both of the following requirements are met:

(a) The waste meets the eligibility requirements of subrule (3) of this rule.

(b) Persons transporting or disposing of the waste comply with subrule (4) of this rule.

(3) Waste is eligible for the transportation and disposal conditional exemption if it meets the LLMW acceptance criteria of a low-level radioactive waste disposal facility or is eligible NARM waste.

(4) To qualify for and maintain the transportation and disposal conditional exemption, persons transporting or disposing of LLMW or eligible NARM waste shall comply with all of the following requirements:

(a) Provide to the department by certified delivery a 1-time written notification that the exemption is being claimed. This notification shall be provided before the initial shipment of exempted radioactive waste from the facility to a low-level radioactive waste disposal facility. The dated notification shall include all of the following information:

(i) The name of the facility from which the waste will be shipped.

(ii) The address of the facility from which the waste will be shipped.

(iii) The telephone number of the facility from which the waste will be shipped.

(iv) The site identification number of the facility from which the waste will be shipped.

(b) A notification to the low-level radioactive waste disposal facility receiving the exempted radioactive waste. The notification shall be sent by certified delivery and shall be provided before shipment of each exempted radioactive waste. The exempted radioactive waste may only be shipped when the facility shipping the waste has received the return receipt of the notice to the low-level

radioactive waste disposal facility. The notification shall include all of the following information:

(i) A statement that the exemption is being claimed for the waste.

(ii) A statement that the eligible waste meets the applicable land disposal restriction treatment standards.

(iii) The shipping facility's name.

(iv) The shipping facility's address.

(v) The shipping facility's site identification number.

(vi) The applicable hazardous waste number or numbers before the exemption of the waste.

(vii) A statement that the exempted radioactive waste must be placed in a container pursuant to subdivision (e) of this subrule before disposal in order for the waste to remain exempt under the transportation and disposal conditional exemption.

(viii) The manifest number of the shipment that will contain the exempted radioactive waste.

(ix) The signature of an authorized representative certifying that the information in the notification is true, accurate, and complete.

(c) The LLMW and eligible NARM waste shall meet or be treated to meet the land disposal restriction treatment standards specified in 40 C.F.R. part 268, subpart D.

(d) If a person is not already subject to NRC or NRC agreement state equivalent manifest and transportation regulations for shipping waste, the person shall manifest the waste pursuant to 10 C.F.R. §20.2006, or NRC agreement state equivalent regulations, and transport the waste pursuant to 10 C.F.R. §71.5, or NRC agreement state equivalent regulations.

(e) The LLMW and eligible NARM waste shall be in containers when it is disposed of in the low-level radioactive waste disposal facility. The containers shall be 1 of the following:

(i) A carbon steel drum.

(ii) An alternative container with equivalent containment performance in the disposal environment as a carbon steel drum.

(iii) A high integrity container as defined by NRC.

(f) The LLMW and eligible NARM waste shall be disposed of at a designated low-level radioactive waste disposal facility that is regulated and licensed by the NRC under 10 C.F.R. part 61 or by an NRC agreement state under equivalent state regulations, including state NARM licensing regulations for eligible NARM waste.

(5) The transportation and disposal conditional exemption shall become effective when all of the following requirements have been met:

(a) The LLMW and eligible NARM waste meets the applicable land disposal restriction treatment standards.

(b) The shipping facility has received return receipts that the department and the low-level radioactive waste disposal facility have received the notifications referenced in subrule (4) of this rule.

(c) The shipping facility has completed the packaging and preparation for shipment requirements for the waste according to 10 C.F.R. part 71 or NRC agreement state equivalent regulations, and the manifest for the waste has been prepared according to 10 C.F.R. part 20 or NRC agreement state equivalent regulations.

(d) The LLMW and eligible NARM waste has been placed on a transportation vehicle destined for a low-level radioactive waste disposal facility licensed by the NRC or an NRC agreement state.

(6) Failure to comply with subrule (4) of this rule shall result in the automatic loss of the conditional exemption of subrule (2) of this rule. If the exemption is lost, the person handling the LLMW or eligible NARM waste shall comply with all of the following requirements:

(a) Provide a written report by certified delivery to the department and the NRC, or the oversight agency in the NRC agreement state. The report shall be submitted within 30 days of learning of the

failure to comply. The report shall be signed by an authorized representative certifying that the information provided in the report is true, accurate, and complete. The report shall include all of the following information:

(i) The specific conditions that were not met.

(ii) The name of the waste losing the exemption.

(iii) The hazardous waste number of the waste losing the exemption.

(iv) The quantity of waste losing the exemption.

(v) The dates upon which the failure to meet the conditions occurred.

(7) If the failure to meet any of the transportation and disposal conditional exemption conditions may endanger human health or the environment, oral notification to the department shall be made within 24 hours and follow up written notification shall be provided within 5 days.

(8) The department may terminate a transportation and disposal conditional exemption, or require additional conditions to claim an exemption, for serious or repeated noncompliance with any of the requirements of this rule and R 299.9822.

(9) A person who has lost a transportation and disposal conditional exemption may regain an exemption. The exemption may only be reclaimed after receipt of the return receipt confirming that the department has received the notification of loss of the exemption, and by complying with all of the following requirements:

(a) Complying with subrule (4) of this rule.

(b) Providing to the department by certified delivery written notification that the exemption is being reclaimed. The notification shall be signed by an authorized representative certifying that the information contained in the notice is true, accurate, and complete. The notification shall contain all of the following information:

(i) An explanation of the circumstances surrounding each failure to comply.

(ii) A certification that each failure has been corrected and that all of the conditions required for the exemption have been met as of the specified date.

(iii) A description of the plans that have been implemented, listing the specific steps taken to ensure that all of the conditions required for the exemption will be met in the future.

(iv) Any other information that should be considered by the department in reviewing the notice to reclaim the exemption.

(10) The department may terminate a reclaimed transportation and disposal conditional exemption if the department finds that the claim is inappropriate based on factors including, but not limited to, any of the following:

(a) Not correcting the problem which resulted in loss of the exemption.

(b) Providing an unsatisfactory explanation of the circumstances surrounding the failure to comply with the requirements for the exemption.

(c) Not implementing a plan with steps to prevent another failure to comply with the requirements for the exemption.

(11) When reviewing a request to reclaim the transportation and disposal conditional exemption, the department may add additional conditions to the transportation and disposal conditional exemption to ensure that the waste management during the transportation and disposal activities will protect human health and the environment.

(12) In addition to the records required by a NRC or NRC agreement state license, all of the following records shall be kept:

(a) The records required pursuant to R 299.9601(1) and (2) and 40 C.F.R. §268.7 to demonstrate that the waste has met the land disposal restriction treatment standards before claiming the exemption.

(b) Notification records and return receipts required pursuant to subrules (6), (7), and (9) of this rule. This information shall be kept at the facility for 3 years after the exempted radioactive waste is sent for disposal.

(c) Notification records and return receipts required pursuant to subrule (4)(a) of this rule. This information shall be kept for 3 years after the last exempted radioactive waste is sent for disposal.

(d) Notification records and return receipts required pursuant to subrule (4)(b) of this rule. This information shall be kept for 3 years after the exempted radioactive waste is sent for disposal.

(e) If a person is not already subject to the NRC or NRC agreement state equivalent manifest and transportation regulations for the shipment of the waste, all other documents related to tracking the exempted radioactive waste as required under 10 C.F.R. §20.2006 or NRC agreement state equivalent regulations, including applicable NARM requirements.

(13) The provisions of 10 C.F.R. §71.5, and 10 C.F.R. parts 20 and 61 are adopted by reference in R 299.11003.

PART 9. HAZARDOUS WASTE EMERGENCY

R 299.9901 "Hazardous waste emergency" defined.

Rule 901. "Hazardous waste emergency" means an actual or potential escape of hazardous wastes or hazardous waste constituents into the environment for which the director, or his or her designee, determines that immediate corrective action to remove or contain the wastes or waste constituents is required to prevent or correct environmental damage.

R 299.9902 Declaration of hazardous waste emergency.

Rule 902. (1) The director, or his or her designee, shall declare a hazardous waste emergency based on the following criteria:

(a) The waste meets the criteria of section 11103(3) of the act, MCL 324.11103.

(b) A determination and oral or written report by on-scene emergency response staff to the director, or his or her designee, that the hazardous wastes or hazardous waste constituents have entered the environment or might enter the environment without corrective action or that corrective action must be taken to eliminate a threat to the environment or public health, safety, and welfare.

(2) If a hazardous waste emergency is declared, it must be declared ended by the director, or his or her designee, when the threat to the environment has ended.

R 299.9903 Report by the on-scene coordinator.

Rule 903. A written report shall be filed with the director, or his or her designee, by the on-scene coordinator summarizing the tasks accomplished, including an evaluation of the effectiveness of the action to control the hazardous waste emergency.

R 299.9904 Rescinded.

R 299.9905 Rescinded.

R 299.9906 Rescinded.

PART 10. AVAILABILITY OF REFERENCED MATERIALS

R 299.11001 Publications; adoption by reference.

Rule 1001. (1) The following ASTM standards are adopted by reference in these rules:
(a) D93-15a ($50).
(b) D698-12 (2015) ($50).
(c) D1557-12 ($50).
(d) D1586-11 ($44).
(e) D1946-90 (2015) ($44).
(f) D2216-10 ($44).
(g) D2434-68 (2006) ($40).
(h) D2487-11 ($50).
(i) D2879-10 ($44).
(j) D3278-96 (2011) ($44).
(k) D4318-10 (2014) ($50).
(l) D4809-13 ($44).
(m) D5084-10 ($64).
(n) D5092-04 (2010) ($50).
(o) D5299-14 ($50).
(p) D5580-15 ($50).
(q) D6450-12 (2014) ($44).
(r) D6913-04 (2009)e1 ($64).
(s) D6938-15 ($44).
(t) D7928-16 ($64).
(u) E168-06 ($50).
(v) E169-04 (2014) ($44).
(w) E260-96 (2011) ($50).
(x) E926-94, Test Method C ($48).

(2) The standards listed in subrule (1) of this rule are available from the ASTM International, Sales Services, 100 Barr Harbor Drive, P.O. Box C700, West Conshoshocken, Pennsylvania 19428-2959. The costs identified in subrule (1) reflect the costs when these rules were promulgated. The standards adopted in subrule (1) of this rule are available for inspection and distribution at the Lansing office of the department; Library, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW. (3403T), Washington, DC 20460, libraryhq@epa.gov; or the National Archives and Records Administration, 202-741-6030, http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(3) The publication entitled "APTI Course 415: Control of Gaseous Emissions," EPA Publication EPA-450/2-81-005, PB91101709, December 1981, is adopted by reference in these rules. The publication is available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161, 703-605-6000 or 800-553-6847, or the Superintendent of Documents, U.S. Government Publishing Office, Washington, DC 20402, 202-512-1800, for $81, the cost when these rules were promulgated. The publication is available for inspection and distribution at the Lansing office of the department; the Library, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, (3403T), Washington, DC 20460, libraryhq@epa.gov; or the National Archives and Records Administration, 202-741-6030, http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(4) The publication entitled "U.S. EPA, Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised," October 1992, EPA Publication No. EPA-454/R-92-019,

PB93219095, is adopted by reference in these rules. The publication is available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161, 703-605-0000 or 800-553-6847, or the U.S. Environmental Protection Agency, Research Triangle Park, North Carolina, 919-541-7645, for $39.50, the cost when these rules were promulgated. The publication adopted in this subrule is available for inspection and distribution at the Lansing office of the department.

(5) The publication entitled "API Publication 2517, Third Edition, Evaporative Loss from External Floating Roof Tanks," February 1989, as amended, is adopted by reference in these rules. The publication is available from the American Petroleum Institute, 1220 L Street, NW, Washington, DC, 20005, for $82, the cost when these rules were promulgated. The publication adopted in this subrule is available for inspection and distribution at the Lansing office of the department.

(6) The publication entitled "Method 1664, Revision A, n-Hexane Extractable Material (HEM; Oil and Grease) and Silica Gel Treated n-Hexane Extractable Material (SGT-HEM; Non-Polar Material) by Extraction and Gravimetry," PB99-121949, is adopted by reference in these rules. The publication is available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161, 703-605-0000 or 800-553-6847, or the Superintendent of Documents, U.S. Government Publishing Office, Washington, DC 20402, 202-512-1800, for $33, the cost when these rules were promulgated. The publication is available for inspection and distribution at the Lansing office of the department; the Library, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, (3403T), Washington, DC 20460, libraryhq@epa.gov; or the National Archives and Records Administration, 202-741-6030, http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(7) The publication~~s~~ entitled "Guidance Manual for the Control of Transboundary Movements of Recoverable Wastes, Annex B: OECD Consolidated List of Wastes Subject to the Green Control Procedure and Annex C: OECD Consolidated List of Wastes Subject to the Amber Control Procedures" (2009) are adopted by reference in these rules. The publications are available for purchase from the Organisation for Economic Co-operation and Development, Environment Directorate, 2 rue Andre Pascal, 75775 Paris Cedex 16, France, at cost. The publications are available for inspection and distribution at the Lansing office of the department.

R 299.11002 NFPA standard; adoption by reference.

Rule 1002. (1) The NFPA standards no. 30 (2015) and 704 (2012) are adopted by reference in these rules.

(2) The standard listed in subrule (1) of this rule is available from the National Fire Protection Association, 1 Batterymarch Drive, Quincy, Massachusetts 02269-9101, for $68 and $46, respectively, the cost at the time these rules were promulgated. The standard adopted in this rule is available for inspection and distribution at the Lansing office of the department.

R 299.11003 Adoption by reference of federal regulations.

Rule 1003. (1) The following federal regulations in 40 CFR are adopted by reference in these rules:

(a) 40 CFR 3.10.

(b) 40 CFR part 60, appendices A and B.

(c) 40 CFR part 63, subparts EEE and LLL.

(d) 40 CFR part 124.

(e) 40 CFR part 144.

(f) 40 CFR part 145.

(g) 40 CFR part 146.

(h) 40 CFR part 147.

(i) 40 CFR 260.4, 260.5, 260.20, 260.21, 260.22, 260.31, 260.32, 260.33, 260.34, and 260.42.

(j) 40 CFR 261.4(h)(4)(i)-(ii), 261.10, 261.11, 261.21(a)(3), 261.32(a), for K181 listing only, (c), and (d), 261.35(b)(2)(iii), 261.39(a)(5), and 261.41, and subparts I, J, M, AA, BB, and CC.

(k) 40 CFR part 261, appendix I, appendix VII, and appendix VIII.

(l) 40 CFR 262.20 to 262.24, 262.27, 262.40(a), (c), and (d), and 262.43, 40 CFR part 262, subpart H, except 40 CFR 262.80, and 40 CFR part 262, subparts K and M, except 40 CFR 262.201 and 262.202.

(m) 40 CFR part 263, subpart B.

(n) 40 CFR part 264, subpart B, subpart C, subpart D, subpart F, subpart G, subpart I, subpart J, subpart K, subpart L, subpart M, subpart N, subpart O, subpart X, subpart W, subpart AA, subpart BB, subpart CC, subpart EE, except 40 CFR 264.15(b)(5), 264.94(a)(2) and (3), (b), and (c), 264.100, 264.101, 264.112(d)(1), 264.115, 264.120, 264.221(f), 264.251(f), 264.301(f), 264.340(a) to (d), 264.344(a)(2) and (b), and 264.1200.

(o) 40 CFR 264.1(j)(1) to (13), 264.71(a), (b), (f), and (h) to (l), 264.72, 264.73, 264.75, 264.94(a)(2), table 1, 264.141, 264.142, 264.144, 264.147(c), (d), and (f), 264.151(g), and 264.554, except 40 CFR 264.554(l).

(p) 40 CFR part 264, appendix I and appendix IX.

(q) 40 CFR part 265, except subparts H, DD, and O, and 40 CFR 265.70, 265.73 to 265.77, 265.112(d)(1), 265.115, and 265.120.

(r) 40 CFR part 265, appendices I and VI.

(s) 40 CFR part 266, subpart H, except 40 CFR 266.100(a) and (b), 266.101, 266.102(a), and 266.112(a) and (c).

(t) 40 CFR 266.203 and 266.205(a), (b), (d), and (e).

(u) 40 CFR part 266, appendices I through XIII.

(v) 40 CFR part 268, including appendices III through XI.

(w) 40 CFR 270.10(e), (g), (k), and (l)(1); 270.11; 270.13; 270.14(b) and (d); 270.15; 270.16; 270.17; 270.18; 270.19(c); 270.20; 270.21; 270.22; 270.23; 270.24; 270.25; 270.26; 270.27; 270.30, except 40 CFR 270.30(l)(1) and (8); 270.31; 270.33; 270.41(a), except 40 CFR 270.41(a)(3); 270.62(a) to (d); 270.64; 270.66; 270.70; 270.71; 270.73; and 40 CFR part 270, subpart H, except 40 CFR 270.80, 270.85, 270.90, 270.155, 270.160, 270.190, and 270.195; and 40 CFR 270.235(a) and (c).

(x) 40 CFR part 273, subpart B, subpart C, subpart D, and subpart E, except 40 CFR 273.10, 273.18(b), 273.30, 273.38(b), 273.50, 273.53, and 273.60.

(y) 40 CFR 279.22, except 40 CFR 279.22(a); 279.23, 279.24, 279.41 to 279.43, 279.45, except 40 CFR 279.45(b); 279.46, 279.51, 279.52, 279.54, except 40 CFR 279.54(a); 279.55 to 279.58, 279.61, 279.62, 279.64, except 40 CFR 279.64(a); 279.65, 279.66, 279.73, and 279.75.

(z) 40 CFR part 280.

(aa) 40 CFR part 302.

(bb) 40 CFR part 761.

(2) Federal hazardous waste regulations are contained in 40 CFR parts 1 to 49, 40 CFR part 60 (appendices), 40 CFR part 63 (Section 63.1200 to 63.1439), 40 CFR parts 100 to 135, 40 CFR 136 to 149, 40 CFR parts 260 to 265, 40 CFR parts 266 to 299, and 40 CFR part 700 to 789, July 1, 2018 editions. These editions are available from the Superintendent of Documents, U.S. Government Publishing Office, Washington, DC 20402, 202-512-1800, for $66, 63, $56, $51, $67, $56, $56, and $67, respectively, the costs when these rules were promulgated. 40 CFR parts 261 and 262 were amended in the Federal Register on August 6, 2018. 40 CFR parts 260, 261, 264, 265, 268, 270, and 273 were amended in the Federal Register on December 9, 2019. Reprints of these federal registers are available from Solid Waste Information, U.S. EPA, 26 West St. Clair Street, Cincinnati, Ohio

45268, at no cost. The sections adopted by reference in this rule are available for inspection and distribution at the Lansing office of the department.

R 299.11004 Federal regulations in 10 CFR, 29 CFR, 33 CFR, and 49 CFR; adoption by reference.

Rule 1004. (1) The federal regulations in 10 CFR part 20, 10 CFR part 61, and 10 CFR part 71 are adopted by reference in these rules.

(2) The federal regulations in 29 CFR 1910.120(q) and 1910.132 to 1910.138 and 29 CFR part 1910, subpart L, are adopted by reference in these rules.

(3) The federal regulations in 33 CFR 153.203 are adopted by reference in these rules.

(4) The following federal regulations in 49 CFR are adopted by reference in these rules:

(a) 49 CFR part 107.

(b) 49 CFR part 130.

(c) 49 CFR part 171 to 180.

(d) 49 CFR parts 190 to199.

(e) 49 CFR 390.21.

(5) Federal nuclear regulatory commission regulations are contained in 10 CFR parts 1 to 50 and 10 CFR parts 51 to 199, January 1, 2018 editions. Federal labor regulations are contained in 29 CFR parts 1900 to 1910, July 1, 2018 edition. Federal navigation regulations are contained in 33 CFR parts 125 to 199, July 1, 2018 edition. Federal transportation regulations are contained in 49 CFR parts 100 to 177, 49 CFR parts 178 to 199, and 49 CFR parts 300 to 399, October 1, 2018 editions. These editions are available from the Superintendent of Documents, U.S. Government Publishing Office, Washington, DC 20402, for $67, $64, $67, $64, $70, $70, and $37 respectively, the costs when these rules were promulgated. The sections adopted in this rule are available for inspection and distribution at the Lansing office of the department.

R 299.11005 Test methods for evaluating solid waste; adoption by reference.

Rule 1005. (1) Test methods in the publication entitled "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, Third Edition, November 1986, and its updates I (July 1992), II (September 1994), IIA (August 1993), IIB (January 1995), III (December 1996), IIIA (April 1998), IIIB (November 2004), IVA (February 2007), IVB (February 2007), V (August 2015), and VI (November 2017 and November 2018) are adopted by reference in these rules.

(2) The documents listed in subrule (1) of this rule are available online from the United States EPA, Office of Solid Waste and Emergency Response, https://www.epa.gov/hazardous-waste-test-methods-sw-846, at no cost. The documents listed in subrule (1) of this rule are available for purchase from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161 or the Superintendent of Documents, U.S. Government Publishing Office, Washington, DC 20402, 202-512-1800. The documents adopted in this rule are available for inspection and distribution at the Lansing office of the department, the Library, United States EPA, 401 M Street, SW, Washington, DC 20460, and the Office of the Federal Register, 800 North Capitol Street, NW, Suite 700, Washington, DC 20002.

R 299.11006 Analytical method for aflatoxins; adoption by reference.

Rule 1006. (1) The analytical method for aflatoxin in the official methods of analysis of the AOAC International, subsection 26, natural poisons, 20th edition, 2016, is adopted by reference in these rules.

(2) The analytical method listed in subrule (1) of this rule is available from AOAC International,

2275 Research Boulevard, Suite 300, Rockville, Maryland 20850-3250, for $50. The document adopted in this rule is available for inspection at the Lansing office of the department.

R 299.11007 Standard industrial classification manual; adoption by reference.

Rule 1007. (1) The office of management and budget document entitled "Standard Industrial Classification Manual" is adopted by reference in these rules.

(2) The document adopted in subrule (1) of this rule is available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at cost. The document adopted in this rule is available for inspection at the Lansing office of the department.

R 299.11008 Soil permeability method; adoption by reference.

Rule 1008. (1) The triaxial cell method for determining the permeability of soil contained in the EPA document entitled "Soil Properties, Classification, and Hydraulic Conductivity Testing," 1984 edition, is adopted by reference in these rules.

(2) The document listed in subrule (1) of this rule is available from the United States EPA, Office of Solid Waste, 401 M Street, SW, Washington, DC 20460, at cost. The document is available for inspection at the Lansing office of the department.

R 299.11009 Availability of documents for inspection and distribution.

Rule 1009. The standards and publications adopted by reference in R 299.11001 to R 299.11008 are available for inspection and distribution from the Michigan Department of Environmental Quality, Office of Waste Management and Radiological Protection, P.O. Box 30241, Lansing, Michigan 48909-7741. The department will charge the prices listed for each standard or publication in R 299.11001 to R 299.11008 plus $20.00 for handling plus shipping.

PART 11. CERTIFIED LOCAL HEALTH DEPARTMENTS

R 299.11101 Rescinded.

R 299.11102 Rescinded.

R 299.11103 Rescinded.

R 299.11104 Rescinded.

R 299.11105 Rescinded.

R 299.11106 Rescinded.

R 299.11107 Rescinded.

The Dow Chemical Company
Midland, Michigan 48674
USA

March 18, 2021

Mr. Michael LaFranzo
Nuclear Materials Safety
USNRC, Region III
2443 Warrenville Road, Suite 210
Lisle, Illinois 60532-4351

Mr. LaFranzo:

This letter is in response to your request for additional information related to the decommissioning plan for License #21-08362-08 received via email on 2/23/2021.

- *Are there any State of Michigan regulations which address the generation of radioactively contaminated asbestos within the State regulations?*

There are no State requirements specific to the generation of radioactively contaminated asbestos. Asbestos-containing materials (ACM) are regulated under the National Emission Standards for Hazardous Air Pollutants (NESHAP) by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Air Quality Division (AQD). The radioactively contaminated ACM in the DOW DC-3 Building is Category II non-friable ACM consisting of fume hood liners and benchtops. Because there is not a high probability of the material becoming friable during packaging and removal, the material is not regulated asbestos-containing material (RACM) and is therefore exempt from NESHAPS. See Attachment 1, "Understanding the Asbestos NESHAP Fact Sheet" for a more detailed discussion. At the top of page 6 of the fact sheet, removal of non-friable ACM is not subject to the Asbestos NESHAP as long as the material is not in poor condition and it remains nonfriable during all phases of removal, handling, and waste disposal.

- *Please provide verification that the State of Tennessee or other entity can and/or will accept the material for disposal.*

The material will be sent to the Toxco Materials Management Center in Oak Ridge, TN for processing and then to the EnergySolutions disposal site in Clive, UT for disposal. These sites have acceptance criteria that are part of their State licenses/permits; the acceptance criteria are in Attachment 2, "DOC-003/Rev. 12, TMMC Material Acceptance Criteria" (asbestos is listed as a service option on Appendix C, Advanced Shipment Notification) and Attachment 3, "EnergySolutions Clive, Utah Bulk Waste Disposal and Treatment Facilities Waste Acceptance Criteria Revision 10" (Section 3.1.14 states that EnergySolutions is authorized to dispose of waste containing both friable and non-friable asbestos).

- *NUREG 1757 Vol 1 refers to mixed waste under NRC, EPA or EPA-authorized State requirements, not necessarily RCRA requirements. Please provide information to show that the material being disposed of be disposed is in accordance with EPA or EPA-authorized State requirements which should include the State of Michigan and State of Tennessee.*

The USEPA defines Low-Level Mixed Waste as hazardous waste regulated by the Resource Conservation and Recovery Act (RCRA) that contains radioactive material regulated by the Atomic Energy Act. See Background information in Attachment 4, "EPA Environmental Fact Sheet, Low-Level Mixed Waste Conditionally Exempt from Hazardous Waste Regulation."

The Michigan Department of Environment, Great Lakes, and Energy, through the Materials Management Division, manages the registration and permitting for hazardous waste. Hazardous Waste is regulated under Part 111 of Act 451. Part 111 is included as Attachment 5. Part 111 defines "mixed waste" as a waste that contains both hazardous waste and source, special nuclear, or byproduct material subject to the atomic energy act of 1954, 42 USC 2011 to 2296b-7, as amended. Part 111 defines "hazardous waste" as a hazardous waste as defined in R 299.9203. Asbestos is not included as a listed or characteristic waste in R299.9203; therefore radioactively contaminated asbestos is not considered a mixed waste under Michigan regulations. The asbestos aspects of the waste have been addressed above.

- *In your response to our request for additional information in a telephonic conversation held on February 2, 2021 (ML210356A133), you state that the transportation and disposal costs for radioactive asbestos waste were included in the decommissioning cost estimate. However, the NRC was requesting the anticipated volume generated and we could not calculate the estimated volume of asbestos to be generated with the information provided. Please provide the estimated volume of asbestos contaminated waste.*

The estimated quantity of radioactively contaminated nonfriable ACM is 96 cubic feet weighing 2,948 lb.

Kelly Wegener-Gave

Kelly Wegener-Gave
Radiation Safety Officer